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TV PROJECT UPDATE
FOUNDATION BASICS

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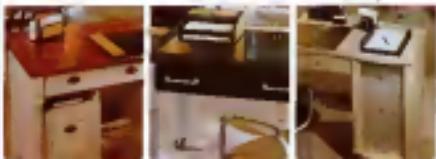
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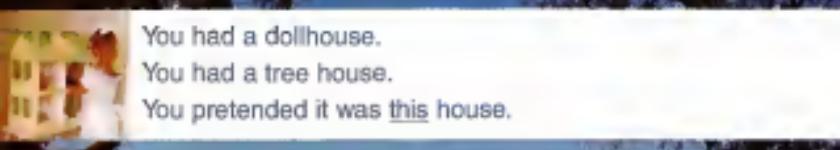
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Review of the



YOU SHOULD SEE WHAT'S ON



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NEW THIS OLD-HOUSE SPRING 2014
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AOL Keyword: This Old House



features

Treasure Hunt

Silos, yards, and a gold mine of vintage house parts. By ALEX R. HOGGAS

A New Old House

A contemporary Craftsman borrows the best from the past. By JOHN HODGES

TV Project House: Pushing Ahead

*As the *Concord* cottage nears completion, the TOH crew makes the most of a small space.* By MAX ALEXANDER

Hollywood Comeback

A sprawling estate from Hollywood's heyday gets a new life. By MARY BETH DENN

Stoves, Cooktops, and Ovens

On TOH's 25th anniversary, we highlight a quarter century of innovation. By TRISH DeCLASSICO



DISCOVER THE ESSENTIAL INGREDIENT. KITCHENAID



STOVE, COOKTOP, AND OVEN. P. 51



PHOTOGRAPH BY DAVID LEE

JANUARY/FEBRUARY 2014

A NEW OLD HOME. P. 24
With its historical pedigree and built-in bookcases, this new house evokes the feel of a traditional Craftsman while meeting the needs of a modern family. For more, see page 76.

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PHOTO: GREGORY FREDERIC; STYLING: LISA MELLO; SET STYLING: KAREN SCHAFFNER; PROP STYLING: JENNIFER TAYLOR

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COVER

WITH their mix of vintage pieces, silos, yards and even the Amish, the Holliday estate looks like before your grandmother gets the better of you. Let the TOH team tell you how to create prepared-and-ready "hangar" meals. See the story on page 40. PHOTOGRAPH BY KELLER & KELLER

FOR THE WAY IT'S MADE.™

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GET THE FEELING
TOYOTA

Geographic areas are increasing, earlier age at onset and lower pre-morbidly and broader symptomatology are associated with an increased risk of hospitalizations and incident non-psychotic symptoms.

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TOP EXTINGUISHER, P. 38

PHOTO BY JEFFREY L. HARRIS FOR THIS OLD HOUSE; EXTINGUISHER COURTESY OF COOPER INDUSTRIES INC.

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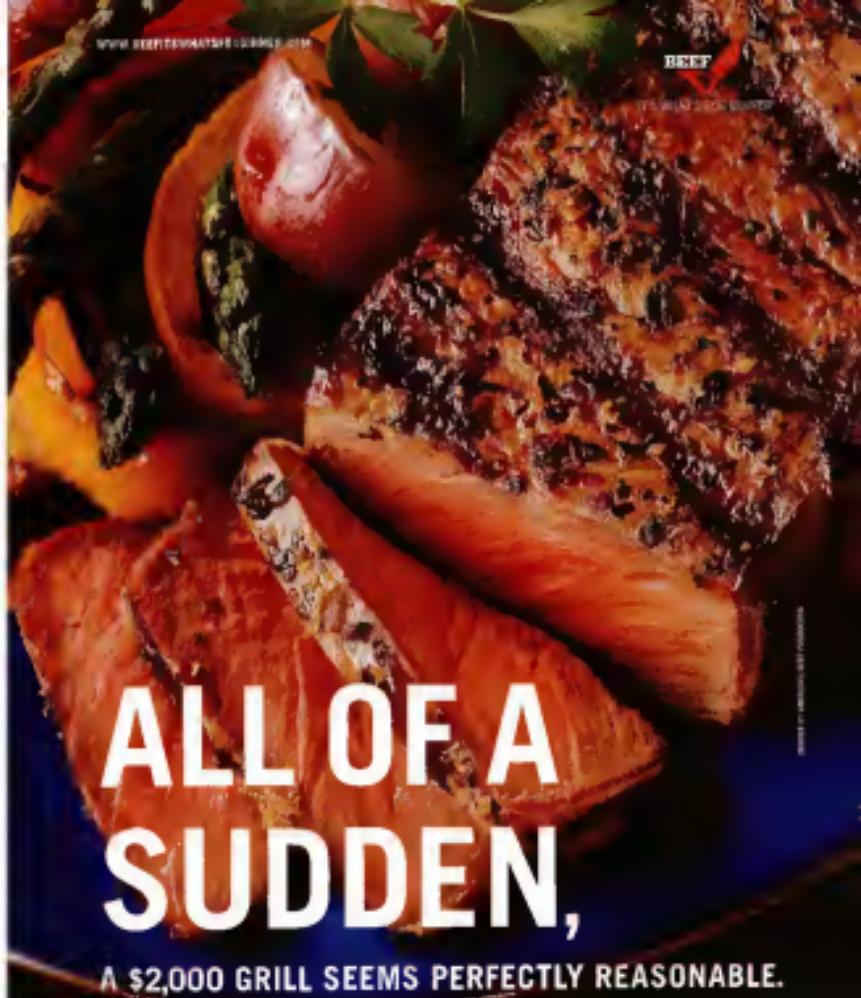
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LETTERS

Dream with
your eyes
open.



Bookshelves

I really enjoyed your cover story on bookcases (November 2002), but the status of material goes beyond factors such as strength and cost. Oak and pine, even with a finish, are not strong enough to damage books over the long term. One solution is to buy the shelf supports add-on items. Tim Klock, Antwerp, Vt.

The editors reply: Experts we checked warn against the level of risk posed by books by the ends or brackets used shelves. But for braced books, living shelves until six-in. (15cm) material may offer extra protection. Available from library-supply companies like www.gutenberg.com and www.unimacproducts.com.

Garage Door Panel Fix

In Ask This Old House, "Replacing the Panels of a Garage Door" (November 2002), James faced with a similar problem: a bottom-section panel creased through by moisture and deteriorating fibers and rails. The door was more than 40 years old and in a commanding location, making replacement an expensive option. I think the strategy he used would not consider. So I repaired the door by installing a new panel out of a piece of plywood cut to the same size as the entire section. Then I made and sanded thin strips and rails to the front of the panel to reinforce so that it would match the other panels. I used a router on the edges of the strips and rails to match the originals and gave the entire door a few coats of paint. The homeowner (aka my mother-in-law) was pleased.

Born Omer, Lawrenceville, Ga.

punch list

Dear Sirs: I am often disappointed when a remodeling project is finished as a condominium. — The exterior of the home featured in "A New Old House," October 2002, was built by the firm of Clegg & Associates, Inc., of Webster, Conn. In response to "Seeking for Details" (October 2002), we applied an exterior license and telephone number for Chippendale House at 800-357-0700.

Submitted by Lorraine, 810 Old Salem Road, #100, the exterior of the home shown in "A New Old House," October 2002, was built by the firm of Clegg & Associates, Inc., of Webster, Conn. In response to "Seeking for Details" (October 2002), we applied an exterior license and telephone number for Chippendale House at 800-357-0700.

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warn users against leaving water-filled buckets around because children can fall in and, unable to tip them over, drown themselves out, down. I would be very wary of using these buckets. A shallow tray would be better—though it would have to be tilted more often.

Gerry L. Cross, Minnetonka, Minn.

The editors reply: Excellent point. Any large container filled with water poses a drowning hazard for small children and animals. In this case, a dry-off bucket should be used for shallow soapsuds only with its lid tightly secured. A few small holes in the lid will help the water drip from the bucket.

Key Inspection for Home Buyers

Your piece on home inspectors ("Looking for Trouble" [October 2002], written) advised us a subject crucial to sum up and remind buyers the specific inspection. First, buyers should find an independent specialist and not rely on a conventional home inspector. Also, take a peek on the traditional low-cost do-it-yourself. This do-it-yourself test indicates only the most severe findings. A better solution is to hire or have test, in which a much larger quantity of water is flushed through the system, followed by a probing of the trench field or digging of a hole to detect infiltration leaking into the surface. This test is usually accompanied by unearthing and opening the tank lid to do a visual inspection.

I write this experience. Two years ago, we opted to spend about \$400 on top of our regular inspection to do a flow test on this 40-year-old home we had considered to buy. Though the prior owners had never had a problem, the test revealed efficient piping or within 10 feet of the lines. The repair was a \$12,000 assessment—which the sellers refused to make. After much stress, we found a better house down the road.

Ken Baum, Winter Haven, Fla.

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before crossing the room.**



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ON THE JOB AT THIS OLD HOUSE



When *This Old House* first aired in 1979, no one could have predicted its enduring popularity or the impact the show would have on the television landscape. Today *This Old House* is more vibrant than ever—a multimedia brand reaching over 45 million people each month through three TV shows (*This Old House*, *Ask This Old House*, and *Fixer*), *This Old House* magazine, and two Web sites (www.thisoldhouse.com and www.firebaseio.com). Come celebrate with us as we kick off our 25th-anniversary year. We've got some great things planned for the coming year—on TV, on our Web sites, and in special features in the magazine (look for the blue 25th-anniversary logo). It's been an exciting journey so far, and the best is yet to come!



The Concord Grape

Did you know that the Concord grape, which predators the grape vine and pollinates many of us grow up on, gets its name from Concord, Massachusetts, home of the current TV show project? In fact, a 100-year-old grapevine is growing a new vine from the 19th-century vintage that the TOH crew is removing. The vine owes its obliquity to Ephraim Wales Bell, who in 1849 planted around 20,000 seedlings (all native to the rugged New England soil) at his Concord farm, before discovering the perfect, cold-hardy grape. Though half-interior-frat paraded entrepreneurial flairs, he died in near-poverty. His descendants wrote "The sweet—she's sharp."

They're still raising. Each year, more than 400,000 tons of Concord grapes are harvested for the production of juice and juice. Once upon this last summer, a few jars of Concord grape jelly were made right at the project house. The reviews were decidedly sweet. Said one lucky taster: "All I could think was, get me the peanut butter! And I don't even like jelly!"

For the complete recipe, and the whole story on the project's juice, go to www.thisoldhouse.com and type "Concord grape" in the search box.

—By Dan DiClerico



GenderBender

Men choose the tools, women pick the curtains, right? Not exactly. A recent study conducted for TOH reveals a far blurrier gender divide in home-product purchases.

We asked: "Use a percentage to indicate how much influence you or other household members had on the most recent purchase of your home's _____." Here's how the numbers stack up.

Type of Purchase	Female	Male
Major kitchen appliances	67%	48%
Hair floor coverings	59%	47%
Decorative hardware	58%	48%
Windows and doors	44%	58%

SOURCE: PG&G

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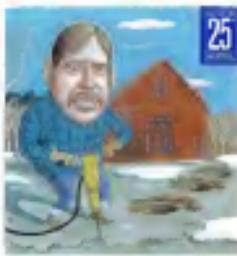
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25
years

Flashback: 1989 Roger Cook

Before I joined Tim Giff-Mausse, I bought into a remodeling business my brother-in-law was operating. There's no such thing as a business, though, and you nit it to a whole new level. It took me all of two TDH projects to figure this out.

We were in Concord back in 1989, and the landscaper planned for a row of screening trees instead of the newly built hedges. No problem, except that it was December before production was ready for the shot, and a cold December at that. The ground was frozen solid. But what could we do—wait for spring to remove them? So the day before the shoot, I went over to the job with a jackhammer, dug up the holes, and the customers rated, that's what everyone says is digging up. I'll tell it looked easy, too, if only they knew. But boy, whatever it takes to get the job done.



QUICK SAND

Parking contractor Jim Clark and his crew are saving time and material on reusing trim with Rotozip's XZ sandblaster. The paper's New Orleans-based honing is extremely flexible and durable, so it can be folded that way without breaking. Plus, its speed-cut treated aluminum oxide grit removes a foot of rot-and-wet shopping. Available in a range of wider sandblast grits at hardware stores nationwide.

Tile Style

From his studio in New Orleans' historic Lower Garden District, artist Mark Darby borrows from surrounding buildings to cast one-of-a-kind ceramic tiles. He makes them from molds taken of existing architectural details, including Victorian-era brass door pull plates, Gothic stonework, and Greek Revival cast iron railings. To cast the tiles, Darby first presses clay into molds, then fires each piece with a palette of historically true glazes. The finished tiles become accents in nests, fireplaces, sunrooms, or kitchen backsplashes. Says Darby, "It's a way of extracting the lives of these historic details by reinterpreting them in modern building materials." Prices range from \$4 for a 2-by-3-inch mosaic tile to \$95 for a 6-by-8-inch border. All are made-to-order and can be purchased through markdarbypottery.com. —Amy R. Aughen



TOP TECHNIQUE

Removing Trim for Reuse

Taking trim off correctly so that it can be installed again is a common order on rising home-repair projects, whether you're replacing windows or laying a new floor. The following steps will help you do it without harming the wood—or yourself.

STEP 1: Scour through the caulk seal between the trim and the wall. This will free up the trim and protect the wall's finish coat.



STEP 2: Working end to end, pry up the trim with a small pry bar or the edge of a hammer. A pully knife slipped behind the pry bar will open finished walls from inside. "I keep the trim from splintering; get your tool as close to the nail as possible, and pry gently."



STEP 3: Remove the trim by pulling the finish nails out from the back side with end nippers.

—Mark Powers

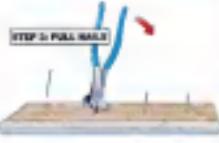


PHOTO BY ROBERT D. HARRIS FOR THIS ISSUE; COURTESY OF MARK DARBY POTTERY

IT WILL DRILL THROUGH WOOD, CONCRETE AND TIME.



The Craftsman CORDLESS DRILL features a variable speed trigger, a 1/4" chuck, and a 1/4" hex shank. It includes a battery, charger, and a carrying case. The drill is designed for use on wood, concrete, and metal surfaces. It has a ergonomic handle and a sturdy base. The battery provides up to 1500 RPM. The drill is perfect for home improvement projects, such as drilling holes in wood or concrete, or driving screws into metal.

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ON THE JOB



B E F O R E & A F T E R

This single-story bungalow cottage in Duluth, Georgia, will have a green roof 100 years old in 2055, thanks to a solar roof installed by David and Jim Wilson. To remove the tall-tile porch, the couple added sheathing, square columns, replaced the concrete floorings with brick, and installed a new

baseboard molding. They also put in a new floor bathroom—a common room of Pleasurehouse since that is necessitated here by the switch to asphalt shingles. Hardwood landscaping rounds out the transformations, including a roof of landscaping pavers and hanging basket ferns.

Photo provided by the city of your home. If you are interested in after-and-after snapshots, please contact us at the project, or 300 E 11th Street, Suite 200, Atlanta, GA 30303. Photo: Matt, MFP 12280.

Lesson Learned

By ROBIE MORSE
WITH PHOTOS BY NEIL HORN



About 15 years ago, my husband and I bought a tiny Greek Revival house. It had exquisite proportions, like a fairytale temple, but it was in appalling condition. It had never had plumbing or wiring, and the owner had kept a horse in the loochee.

Like most old houses, it was directly on the road, and we decided to move it to a better area. The house measured with a fan

business, they'd been doing it for decades, and those possessives worked in our favor.

The grandfather, who came to supervise, walked the site and said, "I think it's a bit damp."

But the surveyor and the contractor said they'd checked and it was fine.

So we moved the house and set about removing it. Not long after,

a big rain hit—and we had a swimming pool in the basement, submerging the new house and everything else 4 feet of water.

If you go to see the house now, there's a lovely new dock pond on one side, and pump pumps in the basement.

I learned to always listen to the older guy on the job site.

Send your own lesson to *READER'S CHOICE CONTEST*. Address to: *Reader's Choice Contest*, P.O. Box 200, Menasha, WI 54952. Please include a self-addressed, stamped envelope. The deadline is May 15 for New York, NY 10022.

Wheel Easy

Talk about reinventing the wheelbarrow. Gartcomax is a new, battery-powered version that makes short work of hauling heavy loads uphill. With a 10-gallon galvanized steel trash can, Gartcomax can carry as much as 400 pounds up a 25-degree incline at a speedy 3 mph (there's no brake, so you'll need to control the weight yourself if you misuse the tool). A 24-volt battery recharges overnight for 8 hours of continuous use. Available for \$399 from www.countryhomeproducts.com.

Did You Know...



The tallest wind building—designed in the United States each year—is surprisingly built at 20 feet high by 20 feet wide along the country's coastline. But according to the Deconstruction Institute, in Charlotte County, Florida, as much as 80 percent of a 2,000-square-foot wind-turbine foundation—including roughly 8,000 board feet of lumber—can be salvaged if properly deconstructed. Admittedly, reducing the materials is a labor-intensive process, but such deconstructions can be cost-effective, except the initial, given the savings on new materials and dispensing fees.

design

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HOUSE CALLS

SMART SOLUTIONS FOR KITCHENS AND BATHROOMS



Clean-lined Shaker-style cabinets, dark granite counters, and a large window above the sink make this modern kitchen seem larger. A sleek stainless steel refrigerator adds another contemporary touch.

C

ontemporary and inviting, the kitchen in Ed and Karen Morell's New Jersey home is proof that a tight budget doesn't have to be a roadblock to a smart renovation. "We had a once-over, 23-year-old kitchen where everything—appliances, counters, flooring—was shot, and just \$16,100 to spend," says Ed. "The space was also so strange-plan that small appliances had taken over the countertops."

Ed, a contractor do-it-yourselfer, knew he could save money by doing the work himself. He also knew that the budget wouldn't allow for major changes like taking down walls, so he carefully layered the existing floor plan—maximizing an inch at a time—to accommodate everything on the couple's wish list. Old, dark wood cabinets were replaced by pale maple ones from the home center. Removing an extra doorway to the hall created space for a new pantry cabinet, a larger fridge, and a much-needed small appliance center. Redesigning the stove and sink parts a few inches gained an extra foot of usable counter space—without the expense of moving plumbing and electrical lines. The overall planning paid off. "Now we have a custom-looking kitchen with triple the storage," says Ed. "And it's an easy-to-work-in."

A \$16,500 makeover turns a small, dated kitchen into a handsome, functional space

PHOTOGRAPH BY KEITH SCOTT MORRISON



Stunning, isn't it?
Stunningly simple.

The new Miele oven is a masterpiece of performance. Its 24 cu. ft. of capacity and quality without cost of use is no quality or

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HOUSE CALLS



WHAT THEY DID

① To clear out more valuable space, a little-used doorway between the kitchen and a hallway was sealed up.

② This made way for a side-by-side refrigerator and a 20-inch-wide pantry cabinet. To the left of the fridge is a small-appliance/breakfast nook; to the right is a recessed

③ To gain a much-needed extra foot of toeable counter space for food prep and cleanup, the new stove was shifted 4 inches to the left, and the positions of the dishwasher and sink were reversed, with the sink moved 8 inches to the right. Back-to-back relocations made it unnecessary to reposition plumbing and electrical lines, which cut renovations costs considerably.

④ Because the lone pantry-door endcap had been the entryway to the dining room, the right side of the entry was enlarged 4 inches, creating enough room for people to pass through when the pantry door is open.

before



above: The 22-year-old kitchen was showing its age, but its biggest shortcoming was insufficient storage and counter space.

above: Clustering a small-appliance center, a side-by-side fridge, and plans-for-closing columns along one wall freed a new work area and storage zone while improving the kitchen's overall flow. The lone entryway was expanded to a hand-friendly 20 inches broad for better traffic. Extra upper cabinets maximize small space.

after



PHOTOGRAPH BY DAVID RODGERS

No detergent needed. Just the trusty, vibrant colors you can imagine. That's what a Sony® 23" LCD WEGA™ TV offers. With its built-in picture frame design, it complements any room. Especially one that demands so much of your time. What's more, with its vivid screen, bass and high-definition capability, you might just take a stronger new interest in today. The Sony line of flat-panel televisions. Available in 10 sizes from 15" to 61". Discover it special offer and download an info-packed brochure at www.sony.com/lcdtv.

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LCD WEGA TV KEN32HM

HOUSE CALLS



THE DETAILS

Little refinements add a custom look you don't ordinarily find in a budget kitchen renovation.



① The well-organized pantry started with stock units. The homeowner added the sliding drawers using slotted cutouts and drawer slides from a kit he purchased online. He debossed the drawer fronts and handles to fit in with the rest of the cabinetry. It took plywood. He also built and installed the plywood inserts on the door and the adjustable shelves.

② Track lights are as a flexible, curved metal rail provides overhead temporary task-lighting. The dining areas' frosted glass shades come from the online retailer Lamps Plus.

③ Frosted-glass panels give the track unit above the sink the look of a custom cabinet. The homeowner customized it by installing hot-wired recessed lights instead to create the illusion of recessed lighting by replacing standard shelves with glass. To build the cabinet, he used a plywood base to hold a tray of growing bamboo; the sides are made and topped it with matching crown molding.

④ Stock unabated ceramic tiles set in a herringbone pattern have a textured finish that mimics stone tiles handmade. The pull-out faucet echoes the sleek stainless steel door pulls, and range hood.

For more *Kitchen Ideas, Inspiration, and products*, go to www.thisoldhouse.com or America Online Keyword This Old House and select "Kitchen" in the Know-how section.



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TOM SILVA
Gardener
Consultant



ROGER COOK
Laptop
Computer



MARK STEWART
Master
Gardener

FURNACE FILTERS

Some time ago I replaced the inexpensive fiberglass air filters in our forced-air heating system with more expensive pleated filters, which I thought would be more effective.

But the person who serviced my system said that the pleated filters add one much resistance to air flow through the ducts, making the system more expensive to operate. Is this true?

—DEN GURKALSKI, WILMINGTON, N.C.



Richard Tretheway replies: You were correct in thinking that these would be superior. Fiberglass furnace filters don't help much to improve indoor air quality. The pleated filters that you installed substantially reduce filter life and are somewhat more expensive, although the ones that are manufactured are efficient. Although a few are far better. Pleated filters add more resistance to air flow, but if you make sure they're rated for the filter capacity of your furnace, you should be okay. For more effective filter options, including 5-inch-thick pleated media filters and electrostatic air cleaners, talk to a heating specialist.

Any filter, pleated or not, will reduce operating costs and restore a heater's performance if you clean it often enough. That's absolutely the most important thing you can do to keep your system running efficiently.

INSULATION ABOVE A DRYER CHIMNEY

At the back of our 100-year-old house there's a flue-tie-off silicon that connects the laundry room and kitchen. These rooms get very cold in the winter because there is no insulation in the 2x6 ceiling joists. To compensate, we've original ceiling surface is plaster covered by a suspended ceiling. I want a warm house. What should I do?

—GREG McCORMACK, BURLINGTON, ILL.

Tom Silva replies: I'd start by getting rid of the suspended ceiling. It doesn't suit the age of your house, and it was probably installed either to cover up damaged plaster or in a misguided effort to provide some thermal comfort. Then I'd contact an insulation contractor who specializes in spraying polyurethane foam insulation. By using foam, you won't have to worry about venting the flat roof. And you'll get a lot of insulating value into your shallow ceiling cavities. It might be possible for this contractor to spray

any filter in a forced-air system has to be changed, just like an old-fashioned cigarette and ashtray with a fine mesh.

flame-through holes drilled in the plaster. But frankly I think I'd be more inclined to remove the plaster, insulate with foam, and then replace or cover the ceiling with drywall.

PART-START MOWER

I am an 80-year-old who still makes a garden and mows his yard. As I've gotten older, however, I've been having a hard time pulling the starter rope on my lawn mower. Is there anything I can do now to prevent this problem, aside from?

—ESTELLE HORNUNG, CHRISTIANA, DELA.

Roger Cook replies: The starter rope of a mower usually gets slightly weaker to pull as the lower gets broken in, so it is possible that something is obstructing the rope or the blade. Following the directions in the owner's manual, try taking off the pull-start housing and cleaning it out to dislodge

Type in or dial "Ask This Old House" on PBS, Thursdays in the second half of "The New This Old House" (8 p.m. ET/PT; check local listings for details) or online at www.pbs.org/thisoldhouse.

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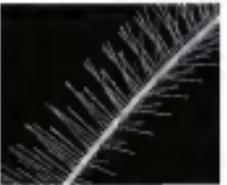
any debris that may be inside. This work is pretty steep to do, and you might think you have a bent crowbar, which will need to be fixed by an experienced small engine repair guy.

Or you might consider buying a new exhaust without a cord. You can take your pick of steel or battery-powered models, as most gas generators with electric starting. With that last type, all you have to do is flip up the trigger to start almost a self-starting device and turn it on. This latter starting feature raises the price about \$100 over an equivalent manual-start gas generator.

BARBED WIRE FOR BIRDS

We have a problem with doves nesting near the top of our chimney. Their constant cooing seems to get louder in the spring, and down the chimney we hear great voices. Please tell us what to do to stop them?

SETH DEGRACI, TALLADEGA, ALA.



Rows of sharp spider-leg hooks from landscaping stores prevent nesting spots.

TOM SILVEY replies: Sounds like your chimney offers an ideal roost in a spacious hot area that doves can't resist, with great views of the surrounding area. The warmth of house rising through the chimney is something even the doves probably like.

There are several ways to stop sooty pigeons, starlings and house sparrows—the main common birds pests in the U.S. The best solution is in your heart: It is to cover the nesting area with spikes to keep them from landing. You could make your own spike strips by driving a lot of long nails through pieces of metal flashing, but you'd probably have better luck using manufactured spikes fastened to the surface you want the birds to resolve. One company, NoSparrow (www.nosparrow.com), makes strips out of stainless steel wire; another company, Bird B Gone (www.birdbgone.com), makes a similar product out of polypropylene—a plastic fiber that

should disintegrate down. If they don't last a place in hand, they won't hang around.

COATED GUTTERS

I want to replace the leaking coated gutters around the corner in front of the house. But my contractor says nobody makes coated gutters anymore, so I'll have to be like cast iron lots of small, square segments soldered together. What do you think?

LORNA REEVES, DIXON, MICH.

Tom Silvey replies: It's hard to imagine as a forest, particularly when it's in the form of a roof, because the pieces, seem to be about right. Besides, segmented gutters would work very well, inexpensive to install, and don't look so good, either.

Fortunately, coated gutters—so-called "modular" gutters in the trade—are still available. At a clip the size of yours, though, it'd be normalize who had to fabricate them—if not by hand laborers who work on churches and homes. If you can't find a local supplier, however, off-the-shelf companies in the U.S. can ship value-gutters to you, either in individual lengths or in 20-foot sections. (Hans Lippelius' Gutter Co., Cooper Works and Sheet Metal Inc., www.hanslippelius.com/gutter.htm, or GrandMills LLC, www.ccm.com/metal-roofing.) You have to choose spigots, like Kynco, too, and fasten.

Especially products like this are expensive, but that isn't the place to go cheap. If you pay now to fix this mess properly, you'll never have to pay more and ever again for repairs down the road. Best of all, your house will look as good as it should.



Covered "valued" gutters may be expensive and hard to find, but they are the last—and the least—bulky—way to separate water from insect nests.

PHOTO COURTESY OF THE HOME DEPOT

We'd like to replace our old wall-to-wall carpet with a new laminated wood floor. We contacted Ask This Old House, and general contractor Tom Silvey showed us the way.

JOHN, MARY, ANDREW, JACK, ALEXANDRA AND KELLY
WILMINGTON, MASSACHUSETTS

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Ask THIS OLD HOUSE

LEAVING A HEATING SYSTEM

We live in a ranch house with a baseboard hot water heating system. I was wondering if we should do anything when we leave for a winter vacation.

PAUL HORNUNG, STONY BROOK, N.Y.

Richard Tretheway replies: The best idea you have is to take damage due to the supply pipes freezing or bursting, especially after a hard freeze.

Closing the main water valve is a good strategy for preventing your house from being turned into a swimming pool when a pipe bursts or a flooded basement spills. That way, water damage will be limited to what isn't already in the pipes. If you want to be extra cautious, you can drain the potable water system, too.

Your heating system is separate from the potable water system, but if you close it, too, you won't have any way to heat the house. That's why you'll have to drain everything to prevent frost damage. That means radiators, traps, the radiator if you have a furnace, the pressure tank (if you have a furnace), the expansion tank, the water softener, the hot tank, the drain leading to the septic tank—unless you're insulating. You get the idea. To seal off that tank, I'd suggest that you move the bather on and just let the temperature drop to 40 degrees or so.

At the first whet you die, there's no sense cleaning up phosphate every month, then every couple of days to save water. Freezing temperatures are ugly. Some homeowners' insurance policies won't even pay for damage caused by water or other systems failures unless the pipe

is checked regularly. You can also hire the house fitted with a temperature monitor that automatically calls an emergency number if indoor temperatures drop too low.

FORGE COLUMN ROT

We can't figure out what to do about the rot on the 12-inch columns of our 1845 house. Fortunately, it's not structural. Someone replaced the broken 18 inches of each column with sections of old railroad tie. It's the ties causing the tree check damage. What sort of wood should we use to make new repairs, and how should we install it?

THE WALKERS, TURNER, ME.

Tom Gulyas replies: It's probably okay to leave the tie in place—they won't last long, just cut out the rotten trim and back in the tie with medium-density overly (MDO), an exterior-grade plywood faced with a phenolic-resin paper MDO is stronger than standard plywood, takes paint very well, and isn't bothered by wet weather.

Nail ½-inch-MDO to the tie with ½-inch stainless-steel screws, which won't corrode. Secure all the joints with a marine-grade polyurethane adhesive and the same stainless nuts. Marine adhesive is waterproof, holds the ties, and helps avoid joints against water penetration.

With us on this topic, let me warn anyone who's thinking about using concrete-powdered ties for their home or garden to think again. Concrete smells like gunpowder on everything, contaminates soil and water, and probably causes cancer. You don't want to touch it, eat it, or have it exposed anywhere around the house, especially when other premium-treated fibers are available.



Last of the porch columns on this 1845 Baltimore house have a wooden tie inserted in their bases.

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ASK THIS OLD HOUSE

REMOVING TABLE-SAW BLADE
I own a wonderful 1934 Craftsman table saw, which I put in storage for years. In that time, the saw's iron table developed some spots. What can I do to restore it?
BERT MESSON, PETTICOAT, TEXAS

NORM ADAMS' RESPONSE: Cast iron is a great surface for table saws, but it does tend to rust if not cared for, or if it has been stored where the humidity levels are high.

The best way to remove minor rust is to scrub with a Scotch-Brite pad and mineral spirits. Then wipe off the residue and apply a lubricant to the top, including the miter-gauge slot, and the sides of the saw's rip fence. I use SILVERTool Lubricating Oil (silver.com) on my saw, but various other paste lubes will also work. Don't use automotive waxes, which contain silicones. If silicone gets on an saw, it will cause problems when you apply the finish.

Carlisle's table saw has another advantage. Wood tables cost \$1,000 per foot—but you add sheets of plywood. That means less effort and greater safety because the wood isn't as likely to崩 up during the cut. I don't have a rigid schedule for refinishing my table top; I just wipe on more lubricant whenever I feel the wood seems to be drying.



Can like stones of this unique building, blocks of brick, stone, and petrified trees, be moved to a new location?

undertaking this project: be sure then you fill any crevices in the wall using hydraulic cement. And when with my sledge, you'll need to put finishing along the edges of the stones to prevent water from getting underneath and causing it to deteriorate.

MOVING A STONE BUILDING

We recently found an old building made of stone and petrified wood. I would like to relocate it and turn it into a guest house. But I don't know if such a thing can be moved, and if so, what sort of company would do it.

ROCK SCHMITZ, RIBERS, TEXAS

TONY OLIVE'S RESPONSE: North Carolina's Cape Hatteras lighthouse—which is over 200 feet tall and weighs 6,000 tons—was transported 8,500

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STUDIO OVER BLOK:
The walls of my walkout basement are made of cement block, which has been painted on the outside. Can I remove the stucco to make them look better?

MARIAH MELTON, HOUSTON, TEXAS

TONY OLIVE'S RESPONSE: Cement block provides a good, solid base for stucco, but if you try to apply directly to the wall, the paint will interact with the bond. Stripping the paint would be a lot more work than it's worth, so you should first build a galvanized metal lath (justed dimensional lumber) up the walls with mesh drywall paper. Then lay on three layers of 4-in-thick fiber-cement plaster (also known as fiber-trowel) about one inch.

It's important to realize that stucco isn't waterproof. If your walls leak now, they'll eventually leak after being stuccoed. So before

you send a question to ASK THIS OLD HOUSE, go to www.buildersresource.com.

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Flame Fighters

Choosing and using fire extinguishers

A fire extinguisher can be a lifesaver. Placed near an exit, in an easy-to-grab spot, it can put out a small fire before the firefighters arrive, or at least suppress the flames while you escape.

All household extinguishers are classified A, B, or C (or a combination of these) on the label to indicate which types of fires—ordinary combustibles, flammable liquids, or electrical—you can use them on (see "Reading the Label," page 48). Many of the ones sold at home stores are classified ABCD and fight all three types of fires.

The main distinction among home extinguishers is size. In most cases bigger is better, but sometimes the biggest extinguishers are too heavy to maneuver. (The weight on an extinguisher refers to the amount of chemical inside; the canister adds several more pounds.) There's also a difference between rechargeable extinguishers, with metal valves, and disposable ones, which have plastic valves. A rechargeable one will cost more, but refilling it once the pressure gauge shows that use or time has depleted the contents is still less expensive than buying a new disposable one.

The National Fire Protection Association (www.nfpa.org) recommends an extinguisher for each floor. But no matter how many you have, nothing can substitute for the most important safety tool: a fire plan. Make sure everyone in the family knows how to get out in a hurry, where to meet outside, and how to call 911. Even if you think you've put out the fire on your own, don't cancel that emergency call. Leave it to the pros to decide if it's really out.

BY JOHN KELSEY PHOTOGRAPHS BY ERIC PIASECKI



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TALKING SHOP: fire extinguishers

Using an Extinguisher

Fire safety experts advise you to learn how to use an extinguisher before an emergency arises. Check with your fire department to see if they offer homeowner training.

Keep extinguishers where you can see and reach them easily, near the main exit. That way you can fight the fire with your back to the door and make a quick escape if flames get out of control.

To help you remember how to use an extinguisher, use the acronym PASS:

- Pull the extinguisher's safety pin.
- Aim the extinguisher at the source of the flames rather than at the flames themselves, standing at least 6 feet from the fire (or as directed on the extinguisher's label).



Pull the extinguisher's safety pin



Aim the extinguisher at the source of the flames



Squeeze the trigger and hold it



Swing the source of the flames until the extinguisher runs dry

STAYING READY

If the extinguisher or spray has pressure-dear lines, rendering it useless when you need it. But if you're the type who forgets to check your car's oil periodically, consider this: fire extinguishers have MULs, called UN-Gauge. It rates off a 12-volt battery and keeps track of the extinguisher's pressure. If the gauge goes low, it flashes a red light and sounds an alert, reminding you to get the extinguisher recharged. It also sounds an alert when the extinguisher has been pulled. So, well, as it would say, it's fire. And this is where it helps, the audio beeps when the battery is low.

It's easy—just make sure you add it to a home's insurance policy. The alarm company gets a signal when the extinguisher is used and calls 911, or 999, or 1111. Cost is \$50 for the micro-electro model or \$1,000 per extinguisher for the security system model, not including fees and installation.



For more information on extinguishers, and tips on fire prevention, go to www.firemanshouse.com or America Online Keyword: This Old House and type "extinguishers" in the search box.

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FROM THE GROUND UP

FOUNDATIONS

BY MAX ALEXANDER



From the Ground Up: 25 Years of Building Experience

Since 1979, This Old House has set the standard for home construction and renovation. In this special issue, the TOH team will tell you how they build a house right, from the foundation to the roof. In addition, we'll highlight a different house system, showing you how prefabricated materials and newer construction techniques can get your eye on. By year's end, you'll know how to build the This Old House way.

A

proper foundation does more than just hold a house above ground. It also keeps out moisture, insulates against the cold, and prevents movement of the earth around it. Oh, and one more thing: It should last forever. No wonder builders like This Old House guys and contractor Tim Blaha take foundations seriously. "Without a good one," he says, "you're nuts."

For Tim, "good" means multi-layered foundations with real drainage instead of poured concrete. By comparison, all the laboratory-constructed foundations of stone, brick, and mortar that have supported buildings for centuries—even the walls of concrete block that most buildings were using when This Old House was launched 25 years ago—aren't quite as durable or leak-prone as Tim's.

But a good foundation requires a lot more than digging a hole and pouring some concrete into form. It must be tailored to an site like a custom suit, taking into account soil conditions, water tables, even the quality of the brick! And as with a custom suit, every detail must be perfect: the bars properly compacted, the framework set up right, the concrete free of cracks. Neglect even one of these, and your carefully planned foundation can fail. That's how Tim builds a foundation that lasts.

The moment of truth: after weeks of preparation, the foundation's framework is ready to be lifted. A truck of 200 tons holds the framework plumb against the weight of the concrete.



"You can't build a good foundation on bad soil." — Tim Blaha

FOUNDATION FACTS

The weight of an average house:

50 tons

The weight of an average foundation:

7 tons

Percentage of total project cost:

8-15%

Foundations by material:

81% poured

16% block

3% other

Foundations by region:

Northeast:

89% full basement

Midwest:

75% full basement

South:

66% slab

West:

63% slab

Building It Right

A foundation is forever, so it makes sense to pay attention to the details that ensure it will remain dry and sound for as long as it has a house to stand up. Here's how take building a house the extra time and effort to make sure your concrete foundation is solid, level and free of the deficiencies that are the bane of every homeowner. The Building Center offers these tips to help you build a foundation to last.

The requirements for a good foundation are simple: a sturdy footer and a vapor-proof, moisture-resistant seal sitting on a bed of compacted crushed stone. The major difference is in the way the slab is constructed to protect against flood waters. For a look at a slab foundation, go to www.thuildingcenter.com/slabs.htm.

Rubber flexible Prevents soil from dragging drainage.

Potential drainage (thin slat, about .40 PVC) intersects groundwater before it can infiltrate foundation below 12 in. below top of footing, below bearing stones. Foundation walls have a high water table.

FOOTINGS \$3,000 per concrete, 18 in. deep, no more than 12 inches wider than foundation wall. Local building codes specify footer for below the frost line if they're placed.



Why Foundations Fail

- Rogorous backfill.** Soils loaded with clay or organic matter hold water like a sponge, increasing the risk of foundation cracks when the soil freezes and expands.
- Rushing the cure.** Concrete must cure slowly to reach proper strength usually 3,000 psi. Keep a damp far at least three days by spraying it a plastic misting with water and other techniques.

- Inufficient compaction.** If the slab is poured over crushed stone that hasn't been firmly tamped, it will likely settle or crack.
- Interrupting the pour.** A concrete form should be filled in one go. If you stop and come back the next day to finish the work, there will be a "cold joint" between the fresh concrete and yesterday's work, which is hard to crack and leak.

As Seen on TV

Great foundation ideas from TCM project houses

PRECAST FOUNDATION

At the Actor, Mass., project, Tom Stiles shaved days off his tight schedule by using precast foundation panels for the addition. When they arrived at the job site, Stiles simply lowered them onto compacted stone, where they were glued together with a polyurethane adhesive. There were no footings, forms, or form ties to deal with, and no demolding to apply the panels' 5,000-psi concrete and integral foam-board insulation strips moisture inhibitors. Insulated, panels generate about 10 percent more than a poured foundation. "We liked them a lot," Tom says. "I'm sure we'll be using them again."



On the Horizon

New technologies for the foundations of the future

SELF-LEVELING CONCRETE

A new chemical called a "super-crafter" generates a mass of bubbles that float in liquid like water but retain structural integrity. Normally, a two-inch mix allows the aggregate to settle to the bottom before the concrete cures, resulting in a weaker wall. "You can back a truck up to the corner and pour the whole foundation," says Bill Bratton, executive director of the Concrete Foundation Association. "It just spreads everywhere." That keeps water from seeping through the concrete where it's needed. And the water on the surface of a slab, the top of "super-crafter" placed concrete automatically sets to level, a great start for finishing.



SLAB HEAT

Say "basement slab" and most people think "cold and damp." Not so at the Silence, Mass., project, where Richard Whitney, TCM plumbing and heating expert, had a two-hundred-foot of PEX tubing (the same stuff used to heat radiant floors) looped on top of 12-in. thick foundation and buried it in 8 in. layers of concrete. Once the tubing was hooked up to the boiler, the basement floor warmed up to a comfortable 56 degrees. At left, plumbing contractor Brian Bilo uses the same system to heat a walkway.

ONE-STEP PIERS

Little sheds and small outbuildings may not need full foundations; they still require solid support from piers resting on well-buried footings. Typically, pier footings are secured on opposite days to allow time for the concrete to cure. Now Tom does it in one shot using funnel-shaped plastic footing forms fitted with cylindrical pier forms. "As far as I'm concerned, there's no better way to make a concrete pier," he says.



FABRIC-FORMED FOOTINGS

Rather than laboriously building brick or concrete masonry units, some contractors are using light-weight fabric rolls of high-density polyethylene fabric. These flexible fabrics expand and contract easily to wrap around uneven sites, which simplifies assembly, and the fabric stays in place as a back-to-the-screwing membrane. The facing sides of the finished footings also help to divert water away from the foundation.

Special 20th anniversary Web sites: Starting in January, we'll celebrate our 20 years of home improvement with a special auction online. Go to www.thisoldhouse.com or [America Online Keyword This Old House](http://AmericaOnline Keyword This Old House).

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THE NEXT F-150

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Fuse boxes, like this one, are less common these days than circuit-breaker panels, but they work just fine—unless someone installs fuses with a higher amperage than the wires can safely handle. That can cause the wires to overheat, damaging

their protective insulation and increasing the risk of fire. Once the insulation has been damaged, the danger remains—even the affected fuse is replaced with one that's the proper amperage. To fix it, the old circuit must be repaired.

Shocking Truths

The top 10 wiring problems and what to do about them

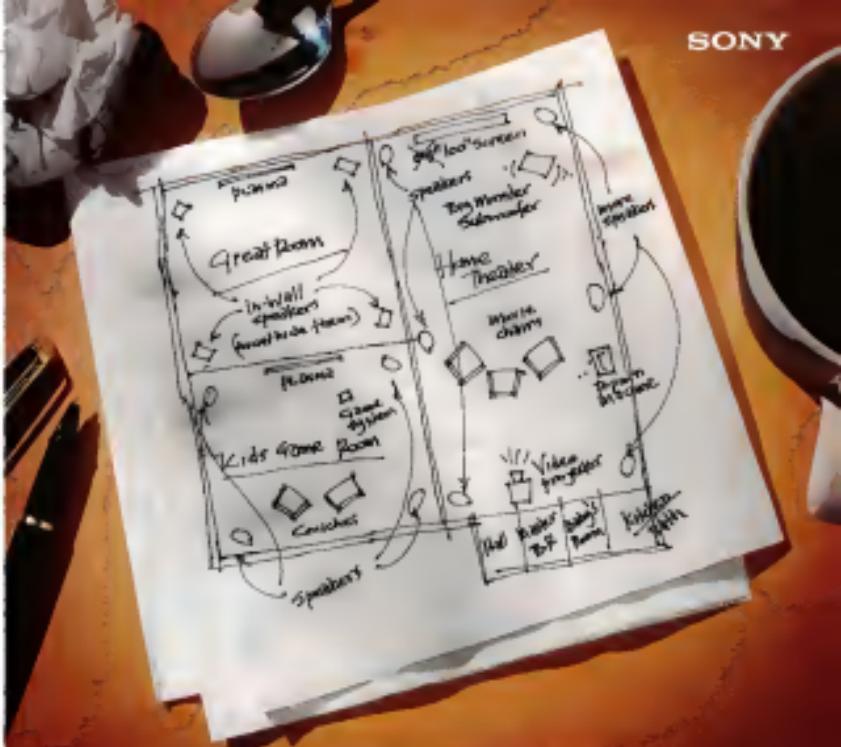
It's not just the nation's power grid that's unprepared. The wiring inside many houses is also out of date, straining to supply our ever-growing collection of electricity-hungry appliances, lighting, and electronics. "The rooms in these older houses weren't designed to power the many gadgets of modern life," says electrician Allen Gallion, who has wired on *The Old House* television project. The signs of stress may be obvious—a tangle of extension cords and power strips operating from a single outlet—or lurking unseen behind walls, ceilings, and cover plates.

Some wiring problems are just inconveniences. But others can pose serious fire or electrocution hazards. If you're buying a house (especially one that's more than 50 years old), or if you've never had your wiring inspected, it's a good idea to hire a licensed electrician to give your home a thorough going-over. "He'll look at the insulation on the wires to see if it's dried out and fraying; he'll look for corrosion in the various joints, and he'll look to see if a previous owner did anything unsafe," Gallion says. After that, he recommends getting a quick follow-up inspection every five years.

Don't be alarmed if the inspection turns up code violations. Each time the electrical code is revised, old wiring is "grandfathered," on the assumption it was installed correctly. Code only requires you to update wiring in rooms being gut-renovated.

To help you assess the state of your own electrical system, we've asked Gallion to identify the 10 most common wiring problems he sees, the dangers they pose, and his recommended solutions. Remember: Augmenting your work with wrong, be sure to turn off the circuit at the main breaker panel.

BY JOSH GARNICK
PHOTOGRAPH BY BEVAN WALKER



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SONY CUSTOM HOME ENTERTAINMENT

10 Most Common Wiring Problems



1. Overheating

What it means: A light fixture has a bulb with a higher voltage than the fixture is designed for.

Code violation? Yes

Danger level: High. The bulb's intense heat can scorch or melt the socket and insulation on the fixture's wires, which increases the risk of an electrical short that jumps through the fixture's metal frame to another—so it's also cause of electrical fires. If you notice a fixture getting warm even after the bulb has been removed,

Solution: Turn off the switch and pull the fixture from the wall.

Safeline: Only wire in the wiring field listed on all light fixtures made since 1985. For older unmarked fixtures, use only 10-watt bulbs or smaller.



2. Uncovered junction box

What it means: Because a junction box houses the splices where wires are connected to one another, a person could inadvertently damage the wires or get a shock.

Code violation? Yes

Danger level: Minimal. As long as wires aren't exposed.

Solution: Spend a few cents to buy a new cover and install it with the screws provided.



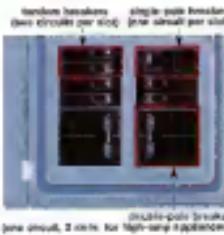
3. Lights flicker when it's windy

What it means: Fried wiring (the weather) heats the outside, causing wires overexposed to rain to become loose and short to ground.

Code violation? No

Danger level: High. Aside from the annoyance, the frayed wiring can arc and start a fire.

Solution: Contact the insurance agency which may replace the weathered utility charge



6. Overloaded panel

What it means: The panel contains more circuits than it's rated for. Inspectors keep many single-pole breakers (one circuit) here because they've replaced with tandem breakers (two circuits) in one slot. (Tandem breakers split the same or "high-leg" double-pole breakers, which take up two slots with one circuit.) A label or small panel specifies how many circuits the panel can accommodate.

Code violation? Yes

Danger level: Moderate. If only breakers are added when the house is being sold and an inspector looks inside the panel,

Solution: Add a subpanel with a few extra slots, or if you're planning major home improvements, replace the existing panel with a larger model (about \$100 to \$1000).



7. Aluminum wiring

What it means: You have the type of wiring used in the 1960s and '70s as a cheap alternative to copper and is no longer considered safe.

Code violation? Not grandfathered in.

Danger level: High. Aluminum corrodes when in contact with copper or aluminum copper, which

Solution: Retrofit a aluminum wire and approved for aluminum wire-in pair coils for less than \$10 onto copper-aluminum connection in light fixtures. These coils have a special grease that stops corrosion while maintaining conductivity. Metal armory (pre-insulated) switches and receptacles are labeled AL-compatible.

8. Backstabbed wires

What it means: On bare terminals and receptacles, wires pushed in the back are more likely to come loose than those crimped around screw terminals.

Code violation? No. The practice is allowed even for new construction.

Danger level: It depends. At a minimum, loose wires can short out a circuit or cause a fire.

Solution: Check for backstabbed connections by removing a switch or receptacle from its outlet box. If one is backstabbed, there are likely to be several. Release the wires and attach them to the appropriate screw terminals on the receptacle.



incorrect terminal



9. Ungrounded (2-prong) receptacles

What it means: Your house is in flag bad not to safely conduct any strong current that requires the safety of the wires.

Code violation? Not grandfathered in. (Today's code requires grounded outlets and receptacles.)

Danger level: Minimal. As long as you don't see an electric shock, a three-prong plug into a two-prong receptacle will do no damage. Just don't believe you're protected in case of a lightning strike.

Solution: Replace two-prong receptacles with properly grounded three-prong ones. If you often use "Old Wring" devices, like old-style washing-machine starters with a GFCI outlet tester to make sure they're grounded, please only use L.

10. Plug falls out of receptacle

What it means: Wires contacts in two places no longer grip the plug firmly.

Code violation? No

Danger level: High. Loose contacts can cause arcing, which can ignite dry wood and dust.

Solution: Repair it (old receptacles are about as far gone as a new car could ever be.) Many homeowners feel comfortable doing their own. Electricians will charge about \$100 to \$150 per outlet, although there's likely to be a minimum charge for small jobs.



4. Too few outlets

What it means: Many rooms on extension cords instead of power strips.

Code violation? No. Grandmothers! (Today's codes require receptacles every 4 feet in a room, only one per 15-foot section.)

Danger level: Moderate. As long as you use heavy-duty extension cords, 14-gauge or thicker, (to reduce the risk of the lower gauge numbers) (Underwriters Laboratories calls 14-gauge or smaller) overheat and ignite a fire if loads are too heavy.

Solution: Add more outlets. Expect to pay an electrician about \$100 per floor outlet and double that for second-floor work. (These will likely be a massive charge.) Then we'll suggest calling him in walls and ceilings to snake the wires. Some electricians will patch the holes others leave the jutting to you.

5. No GFCIs

What it means: Increased risk of electrocution in wet areas, such as bathtubs, kitchens, and laundry rooms.

Code violation? Yes. grandfathered in. (Codes today require GFCIs within 4 feet of any sink and on all garage, basement, and outdoor outlets.)

Danger level: High

Solution: Replace old receptacles with GFCIs (about \$25 each). This is a simple task that many homeowners do themselves. You can charge about \$200 per outlet. (This might be a little bit of a hidden charge.) Hide an alternative GFCI breaker (\$25 can be installed on the main panel.) But that's every time one trips, you have to go closer to the basement to reset it.

Old Wiring: Is It Safe?

Today's standard household wiring is a plastic-covered, insulated three-wire cable, universally known by the trade name Romex. But the vintage copper wiring in many older houses works just as well as the new stuff, so long as it's good condition and hasn't been altered in a way that violates code. Here are some wiring systems you'll find in older houses.



ARMORED CABLE (BX)
The insulation is knob and tube. A flexible steel sheath covers hot and neutral wires, which are insulated with cloth-covered insulation. The sheath provides a ground, so grounded receptacles are easy to install.

Copper: Knob may be melted separately or a metal mesh base. Check continuity of insulation every few years or so; if degradation occurs, as shown above, or if too much current is allowed to flow through the circuit.

THREE-WIRE PLASTIC-SHEATHED CABLE
An early PVC-insulated (Formex) wire.

Copper: Plastic is easily damaged. Grounded receptacles cannot be retrofitted to this wire.

BY LESLIE KEND AND LEIGH KEND

Shaker Furniture

With their clean lines and simple shapes, these pieces work in a variety of interiors



Leslie and I grew up going to flea markets. One of the shows we did when we were teenagers was held at the Shaker Village in Old Chatham, New York. We spent many hours wandering around the old buildings, exploring the rooms, studying the furniture, and imagining what it must have been like to live in such spartan surroundings. Everything about the place had an appealing, practical order about it. It felt tranquil, almost spiritual. It left an indelible impression on us both. Even now, when I look at Shaker furniture, I see it in the context of these buildings and the quiet, orderly life of the Shakers.

But Shaker furniture is far from old-fashioned. It's right at home in modern settings, too, which seems to us continuing popularity today. Shaker pieces look good in a traditional house and fit well with many other styles. And, as Leigh points out, there often has to be a look good in an interior modern setting, like a downtown loft. In fact, Shaker furniture had a strong influence on Danish Modern design as well as some other contemporary furniture styles. And because Shaker pieces are often painted—yellow, blue, red, and green were favorite colors—Shaker furniture can easily complement a collection of folk art.

CLEAN, SIMPLE LINES

Shaker furniture is, above all, simple. That's what the Shakers intended. Because of their religious beliefs, the Shakers frowned on decoration, so they stripped down classic furniture down to the bare essentials. The pieces are lean, light, strong, and graceful. In the country of less is an elegant simplicity—an interior beauty based solely on form. And then there's the tend of craftsmanship. The Shakers believed that every act of labor was



Moving old and new: A pair of contemporary Shaker-style doors flank a 1700-century pedestal table in a room decorated with other vintage collectibles.

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Winds blew at full force
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Promise kept

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WINDOWS & DOORS

Antiques experts Leslie Kend and Leigh Kend are hosts of "Find," a three-TV series on PBS subtitled "The World of Design: Style, Antiques and Living." They also bring six more "new" areas that become "Leslie" on photo.alien.com/kend, their own gallery of American antiques in Manhattan. Leslie is head of the American furniture department at auction house Sotheby's in New York City.

act of worship and that God was guiding their hands when they worked. The craftsman's conviction and purity of purpose can be seen in the meticulous details that make Shaker furniture so special.

The Shakers made furniture from the 1780s on, producing the rustic tables, chairs, simple stands, desks, clocks, chests, workbenches, and buttonwood storage boxes they needed for their largely self-sufficient communities. The classic Shaker pieces—the ones that we most prize by collectors today—were built from about 1820 to 1868. In later years (and as late as 1947), the Shakers might have used some of their downtime for work to the "worn-in wood." You could even order ladderback chairs and rockers from the Shakers' own catalog (sometimes marked with a gold "Shaker's" trademark). These factory-made pieces often lack the superb craftsmanship of their earlier work and bring lower prices today. Surprisingly, since late-19th-century Shaker furniture looks distinctive—Wrenn—lattenwork, dovetails and all.

WHAT TO LOOK FOR

The very best Shaker pieces can bring a small fortune, but you can find original Shaker furniture, boxes, and baskets for less than \$400 or so if you don't go for top-quality pieces. As with most antique furniture, value is based on condition. A piece with original painted finish in good condition is worth far more than a rustic piece that's been refinished. According to Shaker furniture dealer John Keith Russell, of John Keith Russell Antiques Inc. in South Salem, New York, "As with any other antique, one should never go for total originality, except for the antecedent [in closed], which were cut and then replaced." Russell says that pieces for ladderback chairs typically range from \$5,000 to \$2,000 for a ladderback box-top chair and from \$1,000 to \$25,000 and up for a ladderback chair box for the Shakers' uses. Trunk tables, freestanding case pieces, and tall cabinets bring the highest prices.

If you want Shaker style but your budget can't handle the cost of

LEFT: Tall chest, and many refined than this country cousin, this ladderback rocker costs circa 1820, in a typical Shaker junc.

MIDDLE: The typical stand is another familiar Shaker form. This one is a stepped-foot serving stand, circa 1825–1850, with a drawer to hold serving supplies.

RIGHT: The simple flat-panel design on this yellow-painted cupboard, circa 1840–1860, is a hallmark of Shaker design.



PHOTO: BILL SCHLESINGER

With Find! online

For more on the March 1 new show, including information about the products and experts you see on the air, go to www.FindTV.com.



The entrance hall and the dining room keep a lot of eye candy with unique Shaker pieces, including a spindle-back interlatticelace back, a yellow-painted washstand, and a large storage cupboard.

antiques, you might want to look at the wide array of Shaker reproductions that are available. These range from hand-made restorations of original pieces that can cost as much as a real antique to furniture-store items that evoke the Shaker look and style without being strict reproductions. If you're handy, and have the time, you can even buy some well-designed Shaker kits that give you good-looking furniture at a bargain price.



Questions & Answers

REMOVING SPATTERED PAINT

I bought this chair at an auction shop because its original paint was in such good shape. Then my kids splashed a few drops of what looks just like ketchup on it. How can I easily remove the white paint? And can you tell when the piece was made?

PAUL PARTRIDGE, NEWBURY, MASS.

LORI & LESLIE KENG REPLY: Your Shaker-style chair dates from about the 1820s or 1830s and was probably made in New England. It would have been intended

luxurious when made, with freshwater and recycled decoration that brightened the homes of the day. The red indicates grain painting on the seat we suspect to give the look of an expensive wood like mahogany. Such chairs were usually sold in sets of six or eight. The value of this one, which will not be restored, is around \$250. If it were part of a set of six, the piece would be around \$800 per chair.

Since there won't be a good bond between the white latex paint (especially in a water-based formula) and the underlying finish, you'll need Robert Flack, who runs Antique Conservator in West Orange, New Jersey, to suggest removing the spackles with nail-acetate lime. Try to prep the piece as often as possible. And just here, remind the kids to cover furniture with plastic before painting!



ART POSTCARD VALUE

I wonder what you can tell me about this unusual-looking ceramic vase. It's marked "Seng" as the bottom.

DANIEL KELLYHALL, ALLEGHENYTON, PA.

DAVID RABO REPLIES: Seng is best known as a maker of early 20th-century ceramic dinnerware, ashtrays, and giftware. It took over the Roper pottery works in Herington, New Jersey, in the late 1920s (plant operations were later moved to Trenton). Your Seng vase is likely from the 1940s or 1950s, when shells were a popular motif for the company's ceramic dishes and giftware novelties. It's probably worth somewhere between \$50 and \$100.

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among Bring's best valuable production wares. Most valuable are his porcelain bowls, we have sold those at auction for upward of \$4,000 apiece.

SHED RAPS: a specialist in Arts and Crafts furniture and American antiques is owner of David Raps Auctions in Larchmont, New Jersey.



VINTAGE RIDING TOY

I found this old-time ride-on wooden toy at a store in Oregon. Any idea who might have made it and what its value might be?

KENNETH BAUER, SEATTLE, WASH.

NOEL BARRETT REPLIED: Your toy was made by Clegg Ltd., probably in the late 1920s or early 1930s. This firm, Massachusetts toy company, often had tracks for 18-inch and 21-inch wooden cars. Our collection of the original owners' letters, in general, mention Clegg's name as this is not as collectable as the other makers, and my brochure has been written since 1986. It is an attractive piece, and in my opinion it's worth about \$750 to \$1,000.

Noel Barrett, owner of Northeast Antiques and Auctions Ltd., in Greenwich, Pennsylvania, is an antique enthusiast specializing in vintage toys.

MINIATURE CHEST COLLECTION

I've been collecting these miniature items for years. Is anyone they are addressed samples—or that age?

PATRICIA LANE, STURGEON, FLA.

LORI & LESLIE KENG REPLY: Miniature copies are exact replicas of full-size furniture that have been reduced in scale in order to be easily transported and stored.

These were made in the mid-1800s at the turn of the 20th century to showcase not only the precise design of a furniture piece but its wood, finish, and craftsmanship. These drawers cheeks like yours wouldn't be right if full-size scaled up, they should have four or five drawers. Your pieces are made in early oak, pine, or plywood furniture but are still highly collectible. Small pieces like these would pieces on top of a dresser. To held a man's cufflinks or a woman's jewelry. A larger playhouse-sized piece can be put to charming effect as a child-sized bed or an easy chair.



HOMEOWNER'S HANDBOOK

STEP-BY-STEP PROJECT SERIES

"Comfort is everything."

RICHARD TRETHOWEN
THIS OLD HOUSE PLUMBING & HEATING EXPERT

DETACH HERE

ARE YOU ONE OF US?



Replacing an Interior Door

with This Old House general contractor Tom Silva

BY JOSEPH TRUINI PHOTOGRAPHS BY BRIAN WILDER

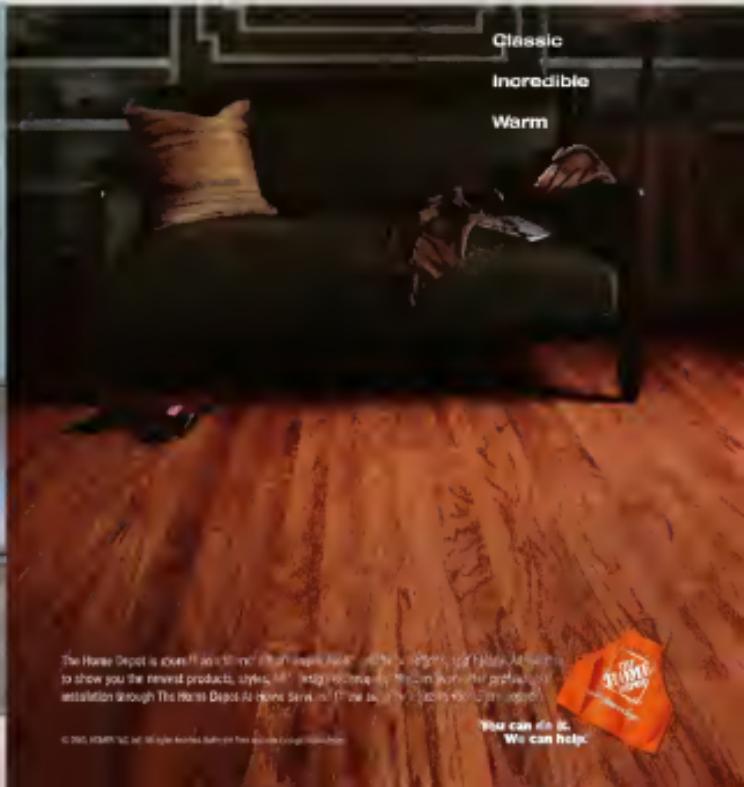
Show me how to make my bathroom more _____.

Inspired
Stylish
Charming



If I had my way, the living room would be _____.

Classic
Incredible
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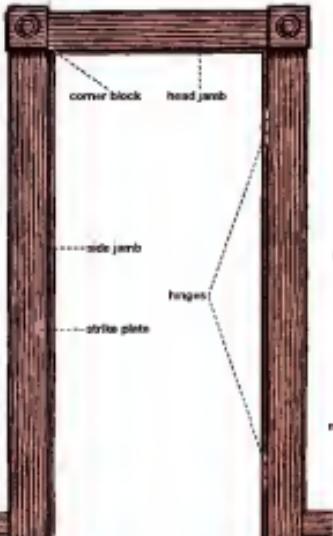
Anatomy

ILLUSTRATIONS BY GREGORY KEREC

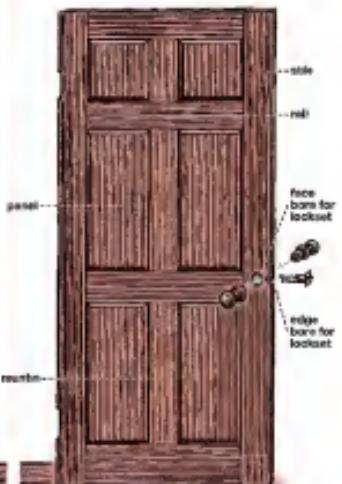
Replacing an existing door with a new one is just about as easy as it sounds—you use the old door as a template to cut the new door to size and to outfit it with hinges and a lockset. Then you replace it in the existing jamb. No fuss, no mess.

Switching out the door in an old jamb is a great solution when you have a door that's badly warped or damaged, or when you want to upgrade all the doors in your home to improve quality or change style. We asked Tom Silva, This Old House general contractor, to take us through the steps. He's hung and replaced so many doors he's lost track of the number. As a result, he's got a few tricks to make things go faster and better.

EXISTING JAMB



NEW DOOR



Step by Step: Replacing an

**1**

Remove the old door

- Stand on the hinge side of the door and remove the pins from the hinge. Always start at the bottom hinge and work up; if the pins don't pop out easily, tap them with a hammer and crowbar (page 36).
- If the pins won't come out by hand, gently tap it out with a hammer and crowbar (page 36).
- Have a helper support the door as you begin to remove the top pin.

TIP: To avoid losing the pins, drop them back into the hinge recesses on the doorknob.

**2**

Mark the new door for trimming

- Remove the lockset (deadbolt) and hinges from the old door. If keeping the lockset, note how it goes together.
- Lay the new door across a pair of sawhorses and set the old door on top, aligning the top end and the lockset edge of the old door perfectly flush with the new door.
- Trace around the old door with a pencil to indicate where the new door must be trimmed down to size (page 36).

TIP: Convert dimensions for an interior interior door to feet on the sides and top (0.5inch) and 1/4-inch at the bottom (0.25inch/paper).

**5**

Chisel out for the hinges

- Lay a protective pad on the floor and stand the new door on edge, with the hinge layout facing up.
- Next, chisel out for the hinges (these are called hinge mortises). Hold the chisel vertically and tap it with a hammer to cut the mortise. Then make a series of closely spaced cuts as deep as the thickness of the hinge.
- Next, hold the chisel at a 45-degree angle with its bevelled face flat against the wood to prevent it from digging in too deeply when completing the mortise.
- Lightly tap the chisel with the hammer to chip away the waste wood a little bit at a time (page 36).

**6**

Screw on the hinges

- Check the depth of the hinge mortise by fitting a hinge leaf; it should be flush with the door edge. If necessary, use this chisel to pare away a bit more wood.
- Set the hinge leaf in the mortise. Use a drill and centering bit to bore pilot holes through the screw holes.
- Screw the hinge to the door jamb.
- Test-fit the door in the opening. Check that it closes without binding and that there's proper clearance (1/4 inch) between the door and frame. If not, plane the edges.

TIP: If you accidentally cut a mortise too deep, chip off some wood or cardboard shims behind the hinge leaf.

Interior Door

**3****Cut the door down to size**

- Score the pencil marks on the new door with a sharp utility knife and straightedge to help prevent the wood from splintering when you cut it with a circular saw.
 - Cut the door to the correct height using a straight-edge guide and a circular saw (page 10). If you need to remove more than 1 inch, take half off the bottom of the door and half off the top.
 - Trim the door to width in the same manner.
- TIP: If resawing less than 1/4 inch, use a hand plane instead of a circular saw.

**7****Drill for and assemble the lockset**

- Mark where the strike-plate hole meets the door edge.
- Position the template supplied with the lockset on this mark and trace for the strike-plate and lock. If raising the old lockset, take measurements from the old door.
- Drill the lockset-hole base with a 2 1/4-inch hole saw. Cut the lockset's edge base with a 1/4-inch spoke bit (page 9).
- Paint or stain the door, as desired, and let dry.
- Insert the lockset assembly into the edge base and trace around it with a utility knife. Chisel out a shallow mortise inside this outline.
- Screw the latch to the door. Then install the doorknob.

**4****Lay out the hinge mortises**

- Lay the old door back on top of the new door, aligning them so that all four edges are flush.
- Line up a combination square with the old door's hinge mortises and transfer their locations to the new door (page 10).
- TIP:** Mark the cut lines for the mortises with a safety blade; it produces a much more precise line than a pencil.

**8****Hang the new door**

- Hold the door in the opening and tighten the hinge knobs (page 9).
- Once all the hinges are aligned, have a helper insert the hinge pins.
- Test the door, making sure it swings smoothly and that the latch engages the strike plate on the doorway. If necessary, reposition the strike plate.
- TIP:** If the door rubs when closed, slightly bend the metal hub that's located inside of the strike plate.

Tools



- Hand plane
- Screwdriver
- Combination square
- Circular saw
- Constitution squares
- Circular saw
- Cordless drill with extra-long Phillips tip
- Utility knife
- 1 1/4-inch hole saw
- 5-inch spoke bit
- Centering bit
- Type measure
- Hammer
- 15-, 18-, and 1-inch-wide chisels
- Utility knife

For an archive of *Homeowner's Handbook*, including the July/August 2002 issue's edition on installing a door, go to www.thisoldhouse.com. America Online Keyword: This Old House. Find select "Homeowner's Handbook" in the Know-how section.

Buyer's Guide: Doors

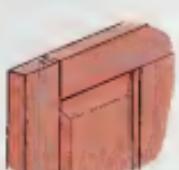
There are three basic types of interior doors, based on their construction: hollow-core, solid-core, and frame-and-panel. Each comes in a variety of styles. Hollow-core doors are the least expensive and most common in new construction, but they don't have the feel, sound-proofing qualities, or longevity of solid doors.

**HOLLOW-CORE**

Hollow-core, solid-wood perimeter with compressed "honeycomb" material in the middle, covered on both sides by a thin skin of fiberboard or expanded composite. Needs to be lacquered or stained. Moderate to less than reduced panels (jambless front). Lightweight and inexpensive at \$25 to \$50.

**SOLID-CORE**

Interior is made up of a skin of composite material or wood blocks glued together that is covered with a finished door skin of fir plywood or melamine laminate. Much heavier than hollow-core and more soundproof. Costs between \$75 and \$200.

**FRAME-AND-PANEL**

Made from solid wood—plies (vertical) and rails (horizontal) surround solid-wood or plywood panels. The most elegant door, though prone to warping. Costs \$200 to \$600 for a finished raised-panel door; less for software.

Door Style

Most flush doors go well with modern styles, such as French or International. Flat-panel doors, with their wide, flat rails and stiles, are best for houses in the Prairie, Craftsman, or Spanish Colonial style. For mid- and late-19th-century houses, such as Greek Revived, Italianate, Queen Anne, and Shingle style, choose a door with four raised panels. And for early American houses, such as Georgian or Federal (or a more refined Colonial Revival), look for five or more raised panels.

Also, make sure to match the swing end (latch) to the door. A simple door style should go with simple latches. Conversely, decorative, raised-panel doors are best with elaborate latches and door handles.

**RAISED-PANEL****FLAT-PANEL****FLUSH DOOR**



LETTER FROM THIS OLD HOUSE

Welcome to the Party

BY BRUCE IRVING
TV SENIOR PRODUCER



What were you doing in the winter of 1979? Getting your driver's license? Beginning college? Or was? Renovating your first house? Or, come to think of it, were you even born yet?

If you happened to be in Boston, in front of a TV set tuned to (of course) PBS, you saw the birth of home-improvement television when *This Old House* debuted in a 13-part local series. Meant—and even its creator, Tom Silva—could have predicted its popularity or the impact it would have on television. Twenty-five years and 16 Emmy awards later, that little show has become the cornerstone of a multi-media brand that includes not only this magazine but three TV series (*This Old House*, *Ask This Old House*, and *Fix It!*) and two Web sites (www.thisoldhouse.com and www.find-it-mojo.com). And it's not just the success of the show that we've really learned. Today there are thousands of TV shows, magazines, Web sites, books, and videos for home and garden enthusiasts.

By the time I joined TOH in 1983, the show was the most popular half-hour series on PBS (and nearly always a classic). But what struck me immediately was the way that Tom and the guys consistently looked into the future, putting the envelope as an industry not known for innovation. Richard Threlkelly, Tom's co-host, a common contractor saying, "I'm happy to say something new—as long as my dad did it." For TOH, it's been a case of knowing the best use of our resources—such as technology or materials, while showing how new approaches that we hope will stand the test of time.

In that spirit, our 25th anniversary year will be as much about looking forward as about celebrating the present moment from our past. For the full house project we'll purchase a classic American beauty in need of rescue and restoration. We'll prepare a fit-and-ready crew of like, using time-honored techniques alongside today's newest technologies. And when our restored home is finished, proceeds from its sale will go to a building arts scholarship meant to address the needs of young people passing the trades.

In the magazine, we're introducing two new statutory features, "From the Ground Up" will detail how technology has changed and continues to change the way houses are built, highlighting a different house "system" such as decks, floors, foundations or exterior finishes. "EE: Best of Innovation" will report on the evolution of appliances, tools, and materials at and around the home—what they look like,

The TOH crew celebrates 25 years: (clockwise from left) general contractor Tom Silva, landscape contractor Roger Cook, plumbing and heating expert Richard Threlkelly, host Kevin O'Connor, and interior designer Morris Abram.

like 25 years ago, what's new on the art scene, and what's in store for the future. We'll also feature special 25th anniversary coverage in the October issue. Meanwhile, this month on thisoldhouse.com, we go live with a dedicated website that includes guides for homeowners of all skill levels, a preview of the TV project, and much more.

Finally, an anniversary celebration wouldn't be complete unless we included our viewers and readers. In August, Norm, Tom, Richard, Roger, and Kevin will embark on a cross-country road trip to meet homeowners and share their ticks of the trade with them. We'll update you on the schedule—but not on the Web—as the tour date-towers

So welcome to the party. We hope you'll enjoy it as much as we plan to.

Coming in the March issue

- Easy upgrades for your kitchen
- Landscaping at the TV project
- Floodproof fixes for wet basements
- Kitchen countertops
- Lighting controls

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PHOTOGRAPH BY KELLER AND KELLER

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A trip to the salvage yard offers something for everyone, as the guys from the *This Old House* TV show discovered. From left: Roger Cook, Kristie O'Conor, Merry Alison, Richard Tretheway, and from left with some of their finds.

TREASURE HUNT

Salvage yards are a gold mine of vintage house parts. The *TOH* crew shows how to separate the gems from the junk

Whether they're called junk shops, architectural antiques stores, or demolition depots, salvage yards are a treasure hunter's dream. These cavernous warehouses are packed with neatly organized collections of old house parts: row upon row of paneled doors and porcelain sinks, cases filled with glass doorknobs and patinaed hinges, and backyards littered with iron benches and elaborate front gates. Some stock high-end reclaimed pieces side by side with lower-priced reproductions. Others hawk their wares online, allowing you to browse for bargains without leaving your living room.

These businesses make it easier than ever to find period parts to restore an old house or put character into a new one without paying for custom work. But while rummaging through a salvage yard is fun, the vast array of choices can be daunting. So on a recent trip to New England Demolition and Salvage in Wareham, Massachusetts, we asked the *This Old House* team for advice on how to tell the trash from the treasure.

BY AMY R. HUGHES
PHOTOGRAPHS BY KELLER & KELLER



Plumbing Fixtures

Salvage yards are famous for stockpiling vintage sinks, claw-foot tubs, and cast-iron radiators. Plumbing and heating fixtures are typically sold "as is." So before you buy, keep in mind that the fixtures will likely need to be repaired, refinished, or—most difficult—retrofitted to comply with modern plumbing codes. "You don't want to end up with a five-foot long claw-foot planter in the backyard instead of a period sinker in the master bath," says TOH plumbing and heating expert Richard Trethewey.

RICHARD TRETHEWEY



TUBS

HOW TO SHOP

- Check your bathroom dimensions, including those for the tub recess, if there is one.
- Choose in the back, and then have it built. "You can't bend an old claw-foot tub," says Richard. They're perfectly angled for receding and add more water than a modern tub of the same length because the overflow drains are higher (typically 16 to 18 inches above the tub floor, compared with 12 to 14 inches today).

WHAT TO AVOID

- Rust spots, chips, and missing feet, which are particularly hard to match.
- Peeling paint on the outside and worn, stained glass on the inside. If a tub does need refinishing, it's best left to a professional.
- Tubs with an undercut or recessed overflow. "There's a flooded bathtub waiting to happen and a septic tank just below plumbing fixtures," says Richard. The overflow should sit at least 2½ inches in diameter.

EXPECT TO PAY

\$150 to \$1,000, depending on material and finish.

BATHROOM SINKS

HOW TO SHOP

- Keep in mind the style of your bathroom. Highly decorated bathtubs accommodate a round or elaborate sink, but contemporary bathtubs call for a clean line.
- Consider surface and installation considerations. Wall-mount sinks typically take up less room than pedestal sinks, but they are heavy and require support in the wall framing.
- Materials matter. Porcelain sinks tend to be finer than enameled cast-iron sinks and typically don't require refinishing.

WHAT TO AVOID

- Rust spots, chips, dents, dings, and deep scratches in cast-iron sinks. Like tubs, they will probably need to be refinishing by a professional.
- Bid cracking (checkling flinny) on porcelain. This can't be remedied.

EXPECT TO PAY

Upward of \$150 for a cast-iron sink; \$800 to \$1,200 for porcelain.

FAUCETS AND FITTINGS

HOW TO SHOP

- Measure the distance between the centers of the faucet holes on your sink and make sure any fixtures you buy can fit there. Faucet stems are typically 4 inches apart, but some give wide or flared or narrow.
- Match faucet connections with those on your water supply valves (chrome).

WHAT TO AVOID

- Incomplete parts. Missing faucet parts are almost impossible to find.
- Really pitted chrome fixtures. "Bell Systems can be repaired, but this is a case of love, not repair," says Richard.

EXPECT TO PAY

\$175 to \$400 for a fully restored faucet set with handles.

CAST-IRON RADIATORS

HOW TO SHOP

- Figure out if you need a **central** or **balance**-heat radiator. Radiators that have only alternative pipe at the bottom can only be used for steam systems. Hot water systems must have two pipes—one that feeds the radiator and a second that recycles cooled water back to the furnace. Radiators must be connected at the top. Steam systems can also have open top connections.
- Try to match replacement parts with others in your house. Most yards stock tall, ornate Victorian-style radiators as well as squat, utilitarian designs from the 1940s and '50s.
- Replace leaky or broken radiators with ones equal in size and output.

WHAT TO AVOID

- Throwing good money after bad. When you find them, check for leaks and handle the dirty job of sandblasting units to remove old paint, then priming and repainting. Avoid those said "as is"—they may leak or function as poorly as the ones being replaced.

EXPECT TO PAY

\$10 to \$20 per section for radiators (excluding valves, slightly more for ones that have been repainted).

RICHARD'S TIP:

Consider using a period sink that has separate hot and cold water faucets only in a powder room. Otherwise, when you want a warm splash in the morning, you'll have to stopper the drain and mix the water in the basin—or risk getting scalded.



Decorative Details



DOORNOBS

HOW TO SHOP

- When looking for a single replacement knobs, bring along its mate. "You don't want to spend the day rifling through a box of hardware only to discover that the knob you bought doesn't fit the spindle," says Norm.
- Bring the measurement of your door's thickness and compare it with the rates between the knobs in a store's "snug fit."
- Choose simple knobs over installing the spindle and the set screws that attaches it to the knob.

WHAT TO AVOID

- Extreme wear and tear such as deep scratches, chips, pits, and dings.
- Antique knobs on doors that need to be locked, because most don't have the right key.
- Glass or brass knobs that have same labels from their boxes, or bezels if a coat of paint.

EXPECT TO PAY

About \$75 for a pair of simple white porcelain knobs and up to \$180 for a single ornate cast-brass one.

HINGES

HOW TO SHOP

- Consider the type and style of your house and choose historically accurate designs or pick ones that echo other decorative details in the house.
- Keep utility in mind. Use weighty substantial hinges on doors and sleek decorative butterfly hinges for cabinets.
- Know which side your door is hinged on and whether it swings in or out. Some old hinges are not reversible.

WHAT TO AVOID

- Incomplete sets. Make sure you have both hinge plates and the center pin used that the hinge pivots smoothly.
- Misaligned hinges. You'll rarely find more than a few places in the same pattern and finish. For a mismatched set, take your revised hinge to a professional plating shop and have them reblended together.

EXPECT TO PAY

About \$20 for a pair of plain cast-iron door hinges, upped to \$100 for more fanciful cast-brass bell hinges.

TRIM

HOW TO SHOP

- Look for unpatented or unlined pieces that don't need to be stripped for paint cleaning with heat paint.
- Get experts to find enough to finish an entire room. Salvaged trim is best for replicating a single cleat or short length of molding missing.
- For larger amounts of salvaged profiles, turn to a lumber yard for duplicate copies. Most shops require a minimum cut of 100 feet.

WHAT TO AVOID

- Dry rot and moldiness.
- Aggressively whitened profiles—the details may have been sanded off.

EXPECT TO PAY

\$4 to \$10 a foot.

OLD GLASS

HOW TO SHOP

- Choose a pane that's "slightly smaller" in width and length than the window opening so the glass can move in the wood sash and contracts.
 - When you break a pane of glass to size, always use a carbide-tipped saw blade since you can't risk it easier to cut.
 - If you can't find a pane of the right size, you may have to buy an entire sheet and remove the glass yourself.
- NORM'S TIP:**
- To take a glass pane, use a plane under the sash to increase or decrease it and score the cleaved glass twice using a carbide-tipped saw blade. Then use a carbide-tipped saw to cut the pane.

WHAT TO AVOID

- Coming up short. Buy extra glass in case you make a mistake. "I've broken that pane of glass crowning size twice I had to cut," says Norm.

EXPECT TO PAY

About \$5 a square foot.



NORM ABRAM

Outdoor Ornaments



ROGER COOK

U nlike new patio furniture and clay pots with flawless finishes, the rusty iron urns, graying wooden trellises, weathered granite birdbaths, and crumbling terra-cotta statuary you find at salvage yards are prized for signs of age.

Flaking paint and stress fractures from years of exposure to the elements help such ornaments blend with all but the most modern landscape designs. "It doesn't fit in the garden if it's shiny," says TOH landscape contractor Roger Cook. "You want garden elements to look like they've been there forever."



WOOD TRELLISES AND ARBORS

HOW TO SHOP

- Determine how you're going to use them. "A single strategically placed tall wood trellis makes fast-growing vines look perfect for obscuring an ugly wall," says Roger. "A arch makes a nice frame for a garden opening."
- Look for recessed, recessed, recessed, or braced, which hold up better than solid planar projects.

• Trellises and arbors usually come "tilted" with peeling paint or dry-graying wood. To "green" the wood and its aged look, knock off loose paint with a soft wire brush and apply a coat of clear deck sealer.

WHAT TO AVOID

- Generally treated or insect-damaged wood.

MATERIALS

• Metal structures—though tree timbers can be used to shore them up, metal will damage cables.

ORNAMENTAL IRONWORK

HOW TO SHOP

- Look for designs that reflect the character of your home. For a traditional garden, try an English open arbor or a more elegant Italian-style Arbor. Ornate decorative scroll work is best with a simple rectangular base made with wrought-iron rods.
- Be creative with limited quantities. You can use short sections of iron fencing to break long expanses of a stone wall. For instance, giving visitors a peek at plantings on the other side.

WHAT TO AVOID

- Pieces that have been aggressively refinished or sandblasted. That may have ruined a well-worn patina or knocked off delicate details.

EXPECT TO PAY

\$30 to \$300 for a cast-iron bench, \$300 to \$1,000 for a 3-foot section of iron fencing.

PLANTERS

HOW TO SHOP

- Consider material, condition, color, and patina to determine whether it fits in with the character of your garden and its decorative elements.
- Look for pieces that you say fit a certain look or feel—antique, rustic, earthy, etc.
- Look for large containers that can serve as conversation pieces or enliven the corners of a garden. Filled with plenty of varying heights, colors, and textures, they become focal points.

WHAT TO AVOID

- Antiques may be too fragile for you if you're not willing to give them extra care.
- Iron planters should be stored indoors—or at least onto a covered porch—to keep them from rusting further or water.

EXPECT TO PAY

\$10 to \$100 for a cast-iron or terracotta container, up to \$5,000 for sculpted granite, marble, limestone, and some ornate cast-iron containers.

For a list of well-stocked salvage yards around the country, turn to page 104.

For more on architectural salvage, Go to www.ThisOldHouse.com or America Online Keyword: This Old House and type "salvage" in the search box.

A contemporary Craftsman borrows the best from the past

A NEW OLD HOUSE

Old houses feel different from new ones, and there's good reason: Finely crafted details and wood finishes that have been burnished by time give these spaces charm and character. Some homeowners recapture the past by buying a fine old home and rejuvenating it. Others, like Tom and Sandi Waldron, want that old-time warmth and personality whopped up in an efficient new space



ABOVE: The exterior, with its prominent front porch supported by square columns and flanked by a low wall, has the look of an early-20th-century Craftsman.

OPPOSITE: The formal dining room opens up to a living room on one end and the kitchen on the other. Such an open scheme, a classic bungalow feature, serves as more than

designed with their needs in mind. The Waldrons' house, set in suburban Minnesota, evokes an early-20th-century Craftsman bungalow, with beamed ceilings, wainscoted walls, glass-front bookcases, and built-in window seating. The house feels old, but the small-scale floor plan typical of an original bungalow has been opened up to suit the way the Waldron family lives today.

"We love it when people come to visit," says Sandi. "They always end up asking, 'Is it old or is it new?'"

(continued on page 80)



GRAB LIFE BY THE HORNS



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At one end of the living room, built-in shelving holding concrete storage drawers and provides a sense of firewood. Built-in cabinets on either side of the fireplace hold stereo components and sheet music. The fireplace's mantel is covered in a contemporary update of classic Craftsman tilework.

STARTING FROM SCRATCH

To combine the warm, aged character they wanted with the modern amenities they needed, the Waldrons turned to Tim Faller and Bryan Anderson of SALS Architects in Minneapolis, who specialize in both new residential design and older home restoration. Stuck close to their fine savings armed with paper torn from magazines that showed Craftsman houses, she admits, "I remodeled a house like the bungalow my mother grew up in, with a nice front porch, beautiful wood detailing, and plenty of nooks where kids could hide," she says.

The plan focused on points of interest like extra baths, walk-in closets, central air, in-floor heating, a basement workshop, and plenty of garage space. A room large enough to hold two pianos and piano lessons was also a must ("We offer piano lessons," says Tim). In addition, the couple wanted a big, family-centered kitchen with a separate dining area for entertaining. They also organized a first-floor master bedroom suite—both as a sanctuary from their three children now and, thinking ahead, as a convenience in their older years. "We plan to be here forever," says Linda.

The Plans

In early 20th-century bungalows the dining and living areas were open to each other, and the kitchen was isolated at the back of the house. Here, all three rooms flow onto one another to promote family interaction and accommodate large-scale entertaining. The first floor also includes a master bedroom suite, a powder room, a mudroom, and a den/masterpiece room. The second floor holds three children's bedrooms, a bathroom, a study, and a reading/TV nook off the hall.



PHOTO COURTESY OF THE WARDLONS



A BLEND OF OLD AND NEW

Taking design cues from older houses they had worked on, architects Faller and Anderson responded with a plan that incorporated the strong, simple lines and woodwork details of a bungalow into a comfortable, 2,000-square-foot space. Downstairs, the open floor plan comprises a multipurpose living room and kitchen linked by a central dining room. Separating the three rooms are coffered ceilings with columns and glass-front display cabinets. "This is a typical Craftsman feature—the studier—which was originally used to hold a small living and dining room together to make them appear larger," says Faller.



On weekends, a swinging-style back porch, and the built-in shelving along walls give the kitchen a Craftsman feel. These dark graining techniques also define the woodwork to take on a rustic edge.

Upstairs, the kitchen's gas-fired furnace was moved to the rear of the house, and in the kitchen, the mosaic tile backsplash below the living room's fire place survived. A blackboard was built into the walling to be accessible to the children.

"It also brought in more light," Bryan explains, addressing a practical concern of the Waldrons, as well. "With three kids, Staci and Tim wanted to see through the house at all times, to keep a watchful eye on change," says Anderson.

Because the small rooms of old bungalows are not conducive to staging piano recitals, the architects created a 13-ft-by-27-ft living area with sofa positions at one end, a central seating area by the fireplace, and a wonderful sunroom area at the other end. "There's plenty of room for an audience," says Anderson, "but the space also can be arranged for intensive testing." A small wing off the living room holds the master bedroom and a bath. Utility function areas group off the kitchen, where a mudroom leads to the laundry/powder room, the garage, and a downstairs workshop. The upstairs was designed with three individual rooms, a bath, a study, and an alcove off the hallway for reading and watching TV.

The biggest challenge facing the architects was fitting the spacious new house into a compact, one-and-a-half-story bungalow shape. "Early-twentieth-century bungalow was only about 800 to 1,000 square feet," says Faller. To support the smaller size, they brought the eaves down and lined it with a single shed dormer. The exterior features a prominent Craftsman-style front porch supported by square columns. Though gables grace the exterior of many old bungalows, Tim and Staci chose a flatter-cement roofline to weather the Minnesota winters. "The intent was to evoke an older home in spirit, if not in exact detail," says Faller.



CRAFTSMAN DETAILS AND FINISHES

Early Craftsman homes owe much of their beauty to the rich materials—details displayed throughout—a standout feature in the Waldron home, as well. Precious woods—buckthorn, weathered cedar, cabinets—were originally purchased as space-saving furniture replacements, and suburban builders and dealers can find them everywhere, less expensive in living colors. "They look decorative, but they're purely functional. We tapped every bit of dead space and used it for storage," says Fuller. Buckthorn was hand-hewn in old-growth oak, then assembled onsite, just as they would have been 100 years ago.

Another Craftsman staple, quarter-sawn oak, is used throughout for the flooring and wainscoting for a unified look—and because oak can withstand wear and tear handsomely. In true period style, the floors, window casings, and other wood finishes in the Waldron home would have been stained in a dark stain. But Sarah wanted light-colored. She painted when the first few windows treated with weather stain turned extremely dark—and called a hake to the work. After resanding the windows and applying a new mix of walnut and cherry stains, the crew achieved an aged, golden color most to her liking.

Vintage Craftsman touches are also evident in the pocket doors of the study, the craftsman-style casings in the living and dining rooms, the prominent framework around doors and windows, and the vertical screen panels enclosing the staircase. Head carpenter Jim Lubke and his uncle, carpenter Tim Sulser, built the vertical screen panels using a blind-screwing technique so no holes would be evident after installation. They painted a new appearance for the work of run-of-the-mill craftsmen and their hand tools while applying wainscoting throughout the house. "The biggest thing is making sure that the drywall put in flat walls," says Jon. "A chair and against a curved wall really shows."

In the two years since it took the homeowners and design team to achieve their architectural vision, no detail was too small to labor over. Even the children's bathroom is adorned with drop-down tiles that evoke the Craftsman style. Such fine, painstaking

work doesn't come cheap, of course. But costs at construction costs reached \$400,000 (the design costs added approximately \$10,000 more). Tim and Sarah still couldn't imagine cutting corners. "That is our dream," says Sarah. "We wanted a warm and friendly family house where we could spend the rest of our lives—and that's exactly what we got." ■



1 This floor-to-ceiling built-in provides a perfect corner of hidden storage and a fine Craftsman design. A decorative side board accents the looks.

Inset: Throughout the house, the owners' focus on the windows is felt, influenced by traditional wainscoting—evident in the master bathroom.



The Beauty of Built-ins

Built-ins—so handy today as they were a century ago—are used throughout the Waldron house to maximize storage and provide the kind of fine furniture. "In keeping with the clean and simple Craftsman design philosophy, built-ins made a efficient use of space," says project architect Tim Fuller. "We employed the idea to give the Waldron family plenty of storage and to preserve open floor spaces."

① A desk makes smart use of dead space between the kitchen and the mudroom, providing a handy place for sorting mail and paying bills. Deep recesses, a recessed surface, and beaded-panel pods give it an antique look. The granite top echoes the kitchen countertop.

② To keep clutter at check, a massive walk-in closet, which fits snugly between the master suite and the master bath, is also used to hold about seven

③ The master bath vanity plays off paneling classic that's typical of Craftsman design, setting the piece on legs adds to its comfortable quiet air. The mirror is flanked on the same classic molding and throughout the house. The surface-mount sink is set in a marble countertop.



For more articles on home design and architecture, go to www.BelkFurniture.com. American Gothic Keyword: This Old House and related Design & Planning in the Know-how section.

THIS OLD HOUSE
TV Project

{Concord, Massachusetts}

TOH general contractor Tim Sikes (left) gives Kevin O'Connor a lesson in shaping clear nail molding.



PUSHING AHEAD

As work on the Concord cottage nears completion, the TOH crew figures out how to make the most of a small space

BY MAX ALEXANDER PHOTOGRAPHS BY BEVAN WALKER



ABOVE: The converted cottage retains the look of a barn, complete with decorative loft and barn doors (opposite) that have been fitted out with windows to bring in light and views. BELOW: Tim Sikes, Myles Ahern, and Kevin O'Connor install a double window that will open up the living room addition.



A YEAR AGO THE BARN BEHIND JANET and Jeff Bennett's house in Concord, Massachusetts—the site of the current TV project—seemed so solidly confounded to become a house. For one thing, it was small, with a footprint of just 20 by 26 feet. For another, it was too much like, well, a barn: Inside the 1834 outbuilding there were no interior walls except for a former horse stall in one corner.

Enter Hilly Crowley, the architect who was given the mission of turning this barny little building into a comfortable in-law cottage for Janet's parents. With the upstairs converted for the master bedroom suite, everything else—the kitchen, living room, dining room, and powder room—had to be shoehorned into the barn's existing first floor. Even for a retired couple with modest space needs, that was a tall order.

BUILDING AN OPEN PLAN

Crowley's first challenge was creating as much new space as possible while adhering to the town's building code, which limits expansion on such historic structures to 20 percent of their "volume," or cubic footage. Adding dormers to open up the second floor added a few cubic feet, so Crowley had space left only for a 12 by 12-foot addition downstairs—just enough for a cozy living room.

Her second challenge was how to create distinct areas without losing the open feel of the barn. Rethinking the way to add interior walls is a good idea in any shotgun house—the conversion of a structure originally built as a home, such as a school or a house—says Les Ponsel, who specializes in restoring historic New England barns and homes. "People walk into a barn and they leave the big spaces, and say, 'Wouldn't that be wonderful as a home?' Then they start cutting it up into tiny spaces."

Crowley's solution was to split the floor plan down the middle. It uses half the ground floor for the small but essential spaces—entranceoyer, coat closet, half bath, stairswell, and hall room (since there's no basement). The other half is an integrated kitchen and dining room; the two areas separated by an archedway and a half wall topped with sliding windows that will lead visual focus to the area while subtly connecting the two rooms with light.

"Most of the time the doors will be open—and invisible," she says. The doors also add flexibility, allowing the living room to double as an extra bedroom.

EXPANDING THE VIEW

An open plan is the best way to give the illusion of more space," says Crowley. So far, she's created a "radiant winter" office, she specified pocket doors for the recessed nook from the dining room on the new living room's additional

The Plans

- ① A 12-by-12-foot living room addition extends the cramped space
- ② New windows along the front of the building let in light to give the downstairs an airy feel
- ③ Pocket doors disappear to open up the living areas but slide closed for privacy
- ④ A half wall topped with sliding windows between the kitchen and dining areas allows light to pass through, making the kitchen feel bigger
- ⑤ A corner with a windowed alcove and a walk-out porch makes the master bedroom feel larger

First Floor



Second Floor



OUTSIDE: The 12-foot square living room addition is small, but a French door with sidelights, plus large windows, makes it feel bigger. **INSIDE:** A dormer with a walk-out porch and three windows makes the master bedroom feel larger.



but also retain its character," he says. In Concord that includes the original sliding barn door, which will go back on the gable end (after an renovation) with two new windows cut in to bring in more light. Initially Niles thought he'd have to build a dormice in his shop, but no closer examination he was impressed by the original door's sturdy mortise-and-tenon construction. "It's well made and needs nothing more than light sanding and a coat of paint," he says. "Why try to duplicate it?" ▀

Watch Now—Access movies of the Concord cottage project
Daily updates uploaded as we go! See what comes after the progress of the job from start to finish. Go to www.thisoldhouse.com or **Amazon Kindle Keyword: This Old House**.

HVAC SYSTEMS FOR TIGHT SPACES

The final challenge of fitting all the necessities into the barn's small space fell to the team of TOW general contractor Tim Silve and HVAC planning and heating expert Richard Tretheway. How to incorporate heating and cooling systems without crowding the already cramped rooms? "With air flow issues and very tight interior walls, ductwork won't fit," says Tim. That ruled out using a furnace-and-air handler, as well as a conventional central air-conditioning system.

Instead, Richard brought standard room-size units in. To cool the rooms, he chose a split system, which has an outdoor condenser and a wall-mounted unit inside each

room. A compact, well-insulated condensing unit provides heat and cool air to the first floor and baseboard radiators upstairs and demineralized hot water. "In the past, designing these small houses to stay quiet has been a issue," says Tim. "You've got all this noise with a small amount of noise, so it's like a car tire." Centralizing heating is highly efficient. They capture more heat from the water in the pipes, which would normally be lost up the chimney. "We like actually have to operate at a lower temperature. As a result," says Richard, "we won't be about as quiet as a refrigerator. It's a whole new way of thinking about heaters, because you mostly can put them anywhere."



Richard Tretheway (right) shows Tim the advantages of wall-mounted heating units.

TV PROJECT: Progress to date



- Plans finished
- Demolition complete
- Systems installed and connected to house them up
- Siding and trim installed
- Windows built
- New shingles finished in

A CRUMBLING ESTATE FROM THE 1920s GETS A NEW LEASE ON LIFE

HOLLYWOOD COMEBACK

The original grandeur of this 1920s house, which was modeled after the Alhambra Palace in Granada, Spain, had been ravaged by vandals and neglect. A determined and imaginative owner restored her home to its state and reenvisioned its romantic elegance.



After eight months of house hunting on a limited budget in the tony Mt. Washington section of Los Angeles, Adrienne Morea stumbled on a sad hulk of an abandoned house. "From the road, I could see three 20-foot-high archways leading to an inner courtyard," she recalls. At the end of the winding drive to the front of the house, she then spotted

BY MARY BETH DUBHR
PHOTOGRAPHS BY MICHAEL WESCHLER
STYLING BY SUNDAY HENDRICKSON

Carefully selected walls with matching silk drapes and an elegant plaster cornice—details made to replace the original which had been carried off when the house was abandoned—help re-create Hollywood's early splendor. During her renovations, Adrienne accomplished the original stucco work with concrete plaster.





Project Particulars

REMODELING COST: \$80,000
HOW LONG IT TOOK: Months
WHERE IT SPLURGED:

Landscape: elegant wrought-iron fence and gates; new trees and shrubs.

WHERE I SPENT

Ripping the house from the inside out cost a fortune, and it served as a example of waste in the kitchen. The original brick黛比的壁炉是老的，但I重新用它装饰了它，现在它是一个美丽的壁炉，我自豪地展示了它，而不是一个普通的壁炉。

WHAT IS SO DIFFERENTLY:
I avoided brick walls like the plague without giving that area of the house more thought. I was just afraid I would make it through another earthquake.

FINAL THOUGHT

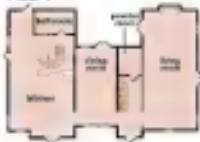
It's really too bad up an old house like this, but I assumed everything was fine, and I got it. Here's hoping it's a forever fix beautiful.



Photo: Michael Morrissey

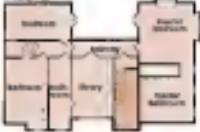
The Plans

Floor 1



The footprint of the house remained the same, but the cross-timbered second-floor guest wing was completely rebuilt as California's most seismically sound. The new upstairs wings are connected by a central balcony, which looks over the interior courtyard.

Floor 2



The overall look on the dining room walls was designed by the homeowner and painted by a local artist with metallic paints.

ang and graceful arches was in the Mediterranean style of architecture popular with the movie elite in the 1920s. Built in 1922, it was modeled after the Alhambra Palace in Spain. Its days of glory were long past, but the dilapidated, 3,795-square-foot dwelling was in a full act—now a rental property—that included a 1,350-square-foot guest house, tropical gardens, and clusters of bamboo and palm fronds. Walking around, she discovered leaky ceramic pipes, foundation, a 15-foot-high outdoor fireplace, and a pool surrounded by overgrown but majestic fig, olive, and cypress trees.

Eager to see the inside, Adesme crawled through an open window. "You could tell that the house had been through some sort of earthquake," she recalls. There were vines growing through cracks in the walls, the 9-foot ceilings were water-damaged, and the wood floors were rotted. Vacant for over a year, the house had also been completely ransacked. Panels were missing, wires dangling where light fixtures used to be, and there wasn't a faucet, a sink, or an electrical socket left. "It was more a shell than a house, but it had accessible bones," says Adesme, who she saw potential in the grounds. "Having been through previous renovations, I wasn't afraid to take it on."

But with the landlocked property in escrow and 10 days away from being sold, Adesme was told it was a long shot. Not one to be discouraged, she made an offer anyway. "I had a feeling that the house and I were meant to be," she says. It was an instinct that would pay off. Days later, it was hers for a fraction of the \$5 million price most houses in the area sell for.

THE WALLS DON'T CRUMBLE DOWN

But restoring an earthquake-damaged house isn't an easy undertaking. Every floor, wall, and ceiling has to be carefully examined by a structural engineer and repaired if possible or rebuilt if not. To Adesme's relief, many of the walls were 12-inch-thick concrete—the place was built like a fortress. That is, all except the crumbling brick walls of two upstairs guest rooms and both "You could see

to the outside in places," says Adesme, who notes that this part of the house was hit hard by the 1994 Northridge earthquake. Ironically, thus were the only rooms that had withstood another big quake, in 1883. So, unlike the rest of the house, they had never been rebuilt to any of California's successively tougher seismic codes over the years.

To perform the work, Adesme brought in structural specialist David Tawaji, who replaced the failing masonry with wood frame and stucco with dry-lay tiles over the lateral forces of an earthquake. California code requires that all major components of a house be joined together structurally. To comply, Tawaji drilled bolts into the house's slab foundation and made engineered connections to floors, walls, columns, and roof so it can move. With the house up to code, Adesme felt much safer, "but I still had a pretty long to-do list," she says.

UPDATING, RESTORING, REPLACING

Over the course of the six-month renovation, cracked walls were replaced, broken windows were repaired (including the curving arched-glass frame of the massive glass window that first attracted Adesme to the house), rotten panels were replaced with either period antiques or custom reproduction, and missing moldings were rebuilt to vintage style. "I wanted everything to look like it had always been there," says Adesme.

Although it took time doing, she reached down a specialist who could duplicate the thin iron plating on the water-damaged walls of the fire. "It's a dying art," says Adesme. Similarly, the decorative rooves on the exterior were repaired and finally finished in the exaggerated, textured texture of the 1920s.

AN ELEGANT AS NEW

Inside, one of the few Mediterranean-inspired details that remained was the cool, green cement floor in the living room, dining room, and foyer. Installed in the '90s, the poured concrete had been pattern-stamped while still wet to mimic crevices, complete with waterholes for growth. And in Adesme's delight, the original terra-cotta floor in the kitchen, though worn, was salvaged, as were the couch's matching architectural moldings. These included a double fireplace surround (which originally held a gas insert), a series of plaster shelves enclosing the ceiling, and corners at the shape of portly flutes. "Except for some chips and cracks, they were amazingly intact," says Adesme.

To give the master bath the flavor of the period, Adesme had to start from scratch. "It looked like someone had begun to renovate but had never finished," she says. "There was a hole next to where the Jacuzzi, but not much else." Adesme had a platform built for a new claw-foot tub and installed a pedestal sink with antique copper fixtures. The floor, probably another earthquake victim, was laid old, angular marble; the cast iron was covered over a plywood subfloor. Unable to find stone to match the



BEFORE: The polished brick pavers feature the original 12-foot-high mediterranean fireplace.

AFTER: The paved area is surrounded by lush cypress and olive trees. The Mediterranean-style landscape, a paved walkway, a paved sunbaked concrete pool, and the fountain.





Han just increased
and broadened
some of the master
bedroom's character,
but he stuck with the
furniture, adding
a new rug and
replacing the
copper accents
and decorative
glass inserts.

original marble has remained to this day, she created the plywood texture of the floor with cream-colored Tahitian tile. "Marble and tile is an amazing mix, and that tile echoes the house's Mediterranean design roots," says Jafarova.

While fixing, replacing, and restoring have been Jafarova's all-consuming passion since she bought the house seven years ago, the person to hear her own words: "Every owner should prioritize at least one architectural enhancement," she says. "Mine will be a Mexican-tiled inground spa for the overexposed. It seems a fitting addition to such a historic house." ■

TELL US YOUR STORY

Did you restore your home or do more of the work yourself? If so, we'd like to hear about your project!

Please send copies of before and after photos, a floor plan (we cannot return any material), and a brief description of the work you did. To:

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The cast-iron tub in the master bath is a reproduction with copper-plated legs. It sits on a broad-frame platform and an copper-colored Schliger tile.

25 Years of Innovation

1979



2004



The shape remains the same, but in terms of performance, today's ranges are leaps and bounds ahead of the '70s counterpart.

STOVES, COOKTOPS, AND OVENS

A lot has changed in the American kitchen in the last quarter century (And not just because men wear the apron more often than they used to.) When This Old House first hit the airwaves in 1979, the standard American kitchen featured a four-burner-electric range—preferred because no one had yet figured out a way to make gas ranges self-cleaning—and, for a lucky few, an over-the-stove microwave. Avocado green and harvest gold still ruled the day, and only the most serious cooks had the best technology: a convection oven, which could cook a 12-pound turkey in under three hours.

What a difference 25 years makes. The high-end kitchens of 2004 are outlined with a non-breath restaurant-style range surrounded by stainless steel, and hardcore cooks wouldn't consider anything but "self-cleaning" capability—gas burners above for high heat, electric

ovens below for precise control. Today's stoves pump out more heat to cook everything faster, clean up easier thanks to sealed-lease hoods and smooth cooktops, and are safer to use because better insulation and the replacement of pilot lights with electronic igniters have cut the risk of fire. If the 1979 range was the equivalent of a horseback, today's is an SUV.

As with any evolution, change is ongoing. So even as we sort through the latest developments, among them a range that doubles as a refrigerator and a microwave oven that uses hologram light to keep food, research-and-development folks are busy—dare we say it?—cooking up a whole new round of improvements. Turn the page for a look at how more manufacturers have adapted to America's changing needs and tastes, and what new developments are on the front burner.

—Don DeGrawe

25
ANNIVERSARY

This Old House

THE PAST

With its Day-Glo-orange counter tops and recessed lights, the kitchen of the first *This Old House* project was typical of the era. So was the stove: a 50-inch black porcelain-enamel range with four 8,000-watt gas burners and a gas-fired oven. The oven had a broiler with built-in ventilation, which was unusual at the time.

That's pretty much what the standard kitchen of 1978 had to offer. But change was in the air. By the end of the '70s, a handful of brands were introducing what would redefine the way people cook.

► **CONVENTIONAL OVEN:** Like everyone cooking, insulation counts: cooktops 25 to 30 percent faster than conventional cooking methods. But unlike microwaves, which can leave food bland and rubbery, convection ovens—which use fans to evenly circulate heat around the oven cavity—inscribe some of the finest

► **INDUCTION INSULATION:** Until the countertop cooktop was introduced, stoves were almost always against a wall, where they could be vented to the outdoors. Downvents, which went through the floor, now-started the move toward design. Eventually, overhanging range hoods followed, leading to the sculptural, chimney-style hoods many today.

► **SMOOTH COOKTOPS:** There's no way to keep pots from spilling or breaking, but inventors of the first smooth cooktops didn't care. Cleaning was as easy as it is today: a layer of glass that covered concealed electric burners. The only downside to this early model was that the glass turned yellow—a problem solved a few years later with the invention of ceramic coating.

► **PREP-STOVES:** An offshoot of 1978, these cooktops were as small as restaurant equipment at home. "They were the highest stoves you'd get for residential," says a spokesman for Neff.

► **REFRIGERATED RANGES:** Whirlpool in Polaris is credited with a cooling invention, which means you can pass a roast in the refrigerator and it still remains moist up to 12 hours. The only downside: It takes an hour to cool a roast after 12 hours. "It's never been refrigerated longer than 12 hours," says a spokesman for Neff.

THE PRESENT

Fast-forward 25 years, to the *Today's Old House* project in Lake Forest, Illinois. The centerpiece of this kitchen—90-inch six-burner professional-grade range in stainless steel—has capabilities barely dreamed of in 1978. The infrared igniter is conveniently hidden at the end of a pilot light and can pump out a torrid 15,000 BTUs for searing, or a gentle 100 BTUs for simmering. With a convection oven in each back-burner slot and a separate warming drawer to keep it hot, the appliance does practically everything but prep the food itself.



A safer flame: Modern surface burners not only pack a lot of BTUs, they also regulate automatically if a flame loses flame wet.

Todays' even-temper ranges can be had in stainless steel, with convection ovens, electronic controls, and at least one high-heat burner. And there are still new-cooking options on the horizon.

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► **TRICTION OVENS:** A combination of thermal, convection, and microwave energy, triction is the latest leap forward in speed cooking. The technology is said to cook food up to five times faster than conventional ovens. Electronic controls automatically convert

from self-cleaning to convection to broiling.

► **INDUCTION COOKTOPS:** These cooktops have magnetic fields that heat food in metal pots or pans. Without panels placed on the cooktop surface, "burners" (the magnetic field) ignites it to heat up. No pan, no heat, so the surface isn't hot.

► **STEAM OVEN:** For most people, steam ovens conjure up images of soggy baked food. But in fact, they can do just about anything, including roasting, steaming, and baking. They can cook faster. Many models can steam up to 100 minutes or less for meat roasting, and because the high moisture content keeps food from drying out, steam is also great for braising.



Dream come true: When *This Old House* asked the owner of the Dream Kitchen what she missed, this was the answer: a six-burner pro-grade range and high-speed baking with steam.



Full circle: The latest ranges come in an array of retro chic colors, including the one that started it all: stainless steel.

THE FUTURE

No matter what the future holds, one thing is certain: Tomorrow's food will taste better and reach the table faster than it does today. According to industry experts, surface cooking is currently getting the most attention from R&D departments at home and abroad. Here are two technologies to watch.

► **INDUCTION COOKING:** Using a powerful electromagnet, these units heat energy in metal pot or pan. Without panels placed on the cooktop surface, "burners" (the magnetic field) ignites it to heat up. No pan, no heat, so the surface isn't hot.

The inducer heats with 80 to 90 percent efficiency versus less than 70 percent for electric and about 60 percent for gas, as McCormick claims. The only catch: Formaldehyde exposure is needed to complete the electromagnetic circuit, so your aluminum, copper, and brass pots are off-limits. The new heat source is also very efficient. Per square foot, high output and performance rival conventional electric elements. High power means that less energy is used, which is good because it's fast, safe, and competitively priced.

► **SMOOTH GAS COOKTOPS:** An another involves in the works: By covering gas burners with ceramic surface heating, manufacturers hope to offer the best of both worlds: the pinpoint control of gas with the easy cleanup of a smooth cooktop. A host of prototypes have been developed, but none already for retail. The challenge, industry insiders say, is designing a covered burner that matches the performance of an open gas flame.



Magnetic magic: With induction technology, the metal cooking vessel, not the burner itself, generates the heat.

60 Years of Change

Starting in January, our special anniversary section will follow the project house, the technology, and even the cover through 25 years of TOH. Go to www.thisoldhouse.com or America Online Keyword: This Old House.

MODERN COOKING MILESTONES

1900



1911: The electric range begins to flourish.

1920



1936: The first pressure cooker designed for residential use is introduced by a New York City manufacturer.

1930

1940

1950

1960

1970

1980

1990

2000

2005



1942: The first built-in oven debuts on TV.



1943: The first built-in range debuts on TV.



1958: Frigidaire introduces the built-in range.



1961: Electrolux introduces the built-in range.



1966: Whirlpool introduces the built-in range.



2002: Whirlpool introduces the built-in range.

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Norm's Notebook

Keeping Your Hands Clean

A lot of people ask me how to get dried polyurethane—glue or foam—off their hands. The answer is, you don't. Once on, it has to wear off. And until then you'll just have to live with dry-looking glue smudges on your hands. Sorry for wading so deep.

I've found that the best way to keep my hands clean when using these products is to wear disposable latex gloves. They're a lot less clumsy than standard work gloves and don't soak through when I'm working with stains. If you're allergic to latex, try gloves made with nitrile or another rubberlike material.

Before I put on these tight-fitting gloves, I rub my hands with baby powder or talcum powder. It makes the gloves easier to put on and take off, and more comfortable to wear; just be careful to keep the powder away from your work and to sweep it off the outside of the gloves if it gets on the wood, or to prevent glue or the finish from adhering.

There's a lot of variation in the durability of cheapo bits you may have to try several brands until you find one you like. I get mine from a marine supply store, but they're also available at grocery stores and through woodworking supply stores. Once you've found one you like, buy a box of them in case they'll always be in demand.



Sharpening a Spade Bit



Most anyone who works on horses eventually accumulates a bunch of spade bits, but most of them are more dull because they've been sharpened. That's shame, because these bits are so easy to hone up.

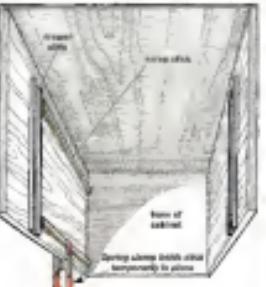
A basic spade bit—the talking about the lead without specifications on the perimeter—has two cutting edges angled very slightly to opposite directions. The goal is to sharpen each edge an equal amount while maintaining the existing angles.

First, clamp the bit in a vise. Then, using the mill bastard file about 1/8 inch wide, take five strokes on one edge, pushing the file in the direction shown in the drawing. Now turn the bit around and take five strokes on the other edge. Always make each stroke the same length. When that's done, place the file flat against the bit face and with each stroke remove the burr that forms on the side opposite each edge. Finally, take two strokes on each side of the bit's face to remove sharp cutting edges, too. (They're also angled in opposite directions.) A few minutes of attention is usually all a dull spade bit needs.

No-Measure Drawer Slides

When I build basic frameless cabinets, I like drawers with full-extension slides. But no work property, each pair of drawer slides has to be measured at exactly the same height, level and length. It's possible to do this by carefully measuring and marking, but I have a method that's faster, easier, and more accurate. I gang-cut a pair of wavy sticks that are long enough to position the uppermost slides.

Just clamp one stick vertically to the side near the front of the cabinet, or the other side toward the back of the cabinet, and rest the slide on top of them. After the slide is screwed to the side of the cabinet, use the same sticks to mount the slide on the opposite side. For the next lower set of slides, simply cut down the original sticks and repeat the process.

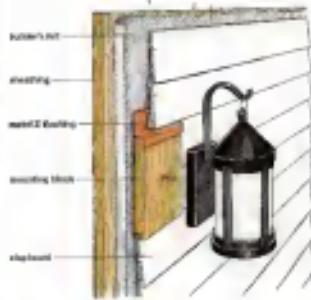


Norm's Notebook

Mounting Base for Wood Siding

Chipboard and sheathing present a problem when it comes to mounting light fixtures, base splices, and even decorative push brackets. The siding offers no plain mounting surface. And put screwing fixtures on top of the siding and it doesn't look very good. A much better solution is to cut away the siding and attach a mounting block directly to the wall sheathing.

The block should be just a little thicker than the shadow point of the siding and slightly wider than the base of the fixture. As for height, cut the block so its top and bottom edges line up with the siding courses as shown. (Some carpenters notch the siding to fit around the top of the block, but that looks cluttery to me.) Also, make sure to tap the block with wood 2. Failing to water-wash it behind it.



How to Remove a Doorjamb



It seems that most of the remodeling jobs we do on The Old House call for relocating doors—including the casing and the jambs—so we've gotten pretty good at it. Here are the steps we follow to keep damage to a minimum:

First, remove the pins from the hinges and set the door aside. Then, carefully pry the casing all one side of the opening with a flat bar. This gives you access to the nails holding the jamb to the surrounding framing. Just drive through them slowly between the back side of the jamb and the studs with a reciprocating saw and a drywall blade. Now go to the opposite side of the door and pry the casing to free, push it in, and the jamb out of the opening.

Also, be sure to pound in the ends of any several studs that remain in the framing. If you don't, sooner or later somebody will snag a sleeve, or worse.

Removing Stubborn Screws

If a wood screw is clogged with paint so there's no way your screwdriver blade can get a grip, a scratch and sand it better than a utility knife for cleaving the paint.

But if the slot is damaged, try this: Clean out the paint as above, then get the tip of the screwdriver in what remains of the slot and tap it sharply several times with a hammer to drive the tip deeper into the slot. This is especially effective with screws made of brass or bronze.



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The same abuse imparts warmth and comfort, Harmony is a full overlay door featuring classic miller construction with a veneer recessed center panel and a matching five piece drawer front. Its profile provides the perfect canvas for the rich chocolate glaze found in our Honey finish. Honey, is now available on our new Harmony door style in The Select Series.



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